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*\*County specific computer generated reports.*



## ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS

Reno County, Kansas: Published

Map symbol	Soil name	Acres	Percent
990	Abbyville Loam, 0 To 1 Percent Slopes-----	3,122	0.4
991	Abbyville-Kisiwa Complex, 0 To 2 Percent Slopes, Flooded-----	6,896	0.8
1004	Albion Sandy Loam, 0 To 1 Percent Slopes-----	1,517	0.2
1011	Albion-Shellabarger Sandy Loams, 1 To 3 Percent Slopes-----	23,878	2.9
1057	Aquents, Frequently Ponded-----	91	*
1061	Arents, Earthen Dam-----	50	*
1062	Arents, Loamy-----	145	*
1070	Avans Loam, 0 To 1 Percent Slopes-----	15,456	1.9
1071	Avans Loam, 1 To 3 Percent Slopes-----	22,488	2.8
1072	Avans Loam, 3 To 7 Percent Slopes-----	1,520	0.2
1191	Blazefork Silty Clay Loam, 0 To 1 Percent Slopes, Rarely Flooded-----	414	*
1192	Blazefork-Kaskan Complex, 0 To 1 Percent Slopes, Rarely Flooded-----	1,313	0.2
1200	Buhler-Blazefork Silty Clay Loams, 0 To 1 Percent Slopes, Rarely Flooded-----	3,029	0.4
1324	Carway And Carbika Soils, 0 To 1 Percent Slopes-----	6,728	0.8
1357	Carway-Dillhut-Solvay Complex, 0 To 2 Percent Slopes-----	4,810	0.6
1359	Clark-Ost Loams, 3 To 7 Percent Slopes-----	3,174	0.4
1428	Crete Silt Loam, 0 To 1 Percent Slopes-----	4,225	0.5
1429	Crete Silt Loam, 1 To 3 Percent Slopes-----	5,237	0.6
1553	Darlow-Elmer Complex, 0 To 2 Percent Slopes-----	19,403	2.4
1554	Dillhut Fine Sand, 1 To 3 Percent Slopes-----	1,716	0.2
1555	Dillhut-Plev Complex, 0 To 2 Percent Slopes-----	5,556	0.7
1556	Dillhut-Solvay Complex, 0 To 3 Percent Slopes-----	12,466	1.5
1725	Farnum And Funmar Loams, 0 To 1 Percent Slopes-----	27,529	3.4
1727	Funmar-Taver Loams, 0 To 2 Percent Slopes-----	20,502	2.5
1804	Geary Silt Loam, 1 To 3 Percent Slopes-----	1,317	0.2
1807	Geary Silty Clay Loam, 3 To 7 Percent Slopes, Moderately Eroded-----	252	*
1985	Hayes Fine Sandy Loam, 1 To 5 Percent Slopes-----	4,502	0.6
1986	Hayes-Solvay Loamy Fine Sands, 0 To 5 Percent Slopes-----	31,866	3.9
1987	Hayes-Turon Complex, 0 To 5 Percent Slopes-----	8,593	1.1
2204	Jamash-Piedmont Clay Loams, 0 To 1 Percent Slopes-----	3,369	0.4
2205	Jamash-Piedmont Clay Loams, 1 To 3 Percent Slopes-----	29,029	3.6
2206	Jamash-Piedmont Clay Loams, 3 To 12 Percent Slopes-----	2,341	0.3
2207	Jamash Clay Loam, 0 To 8 Percent Slopes-----	5,893	0.7
2381	Kanza-Ninnescah Sandy Loams, 0 To 2 Percent Slopes, Commonly Flooded-----	21,546	2.6
2390	Kaskan Loam, 0 To 1 Percent Slopes, Rarely Flooded-----	2,255	0.3
2391	Kaskan Silty Clay Loam, 0 To 1 Percent Slopes, Frequently Flooded, Channeled-----	1,720	0.2
2395	Kisiwa Loam, 0 To 1 Percent Slopes-----	5,869	0.7
2509	Ladysmith Silty Clay Loam, 0 To 1 Percent Slopes-----	758	*
2556	Langdon Fine Sand, 0 To 15 Percent Slopes-----	11,458	1.4
2587	Imano Clay Loam, 0 To 1 Percent Slopes, Occasionally Flooded-----	5,851	0.7
2588	Longford Silty Clay Loam, 3 To 7 Percent Slopes, Moderately Eroded-----	1,276	0.2
2812	Mahone Loamy Fine Sand, 0 To 2 Percent Slopes, Rarely Flooded-----	6,346	0.8
2948	Nalim Loam, 0 To 1 Percent Slopes-----	23,391	2.9
2949	Naron Fine Sandy Loam, 3 To 7 Percent Slopes, Moderately Eroded-----	2,716	0.3
2950	Naron Fine Sandy Loam, 7 To 15 Percent Slopes, Moderately Eroded-----	327	*
2951	Nash Silt Loam, 1 To 3 Percent Slopes-----	6,096	0.7
2952	Nash-Lucien Silt Loams, 3 To 7 Percent Slopes-----	763	*
2953	Nash-Lucien Silt Loams, 7 To 15 Percent Slopes, Moderately Eroded-----	2,286	0.3
2955	Nickerson Fine Sandy Loam, 0 To 1 Percent Slopes-----	3,298	0.4
2956	Nickerson Loamy Fine Sand, 0 To 2 Percent Slopes-----	5,076	0.6
2957	Nickerson-Punkin Fine Sandy Loams, 0 To 2 Percent Slopes-----	3,565	0.4
2958	Ninnescah Fine Sandy Loam, 0 To 1 Percent Slopes, Occasionally Flooded-----	3,439	0.4
2959	Ninnescah Fine Sandy Loam, 0 To 1 Percent Slopes, Occasionally Flooded, Saline-----	2,555	0.3
3051	Ost Loam, 0 To 1 Percent Slopes-----	8,880	1.1
3052	Ost-Clark Loams, 1 To 3 Percent Slopes-----	23,478	2.9
3170	Penalosa Silt Loam, 0 To 1 Percent Slopes-----	8,355	1.0
3171	Penalosa Silt Loam, 1 To 3 Percent Slopes-----	4,511	0.6
3180	Pratt Fine Sand, 5 To 10 Percent Slopes-----	4,530	0.6
3181	Pratt-Turon Fine Sands, 1 To 5 Percent Slopes-----	25,578	3.1
3190	Punkin Silt Loam, 0 To 1 Percent Slopes-----	4,609	0.6
3191	Punkin-Taver Complex, 0 To 1 Percent Slopes-----	14,192	1.7
3403	Sand Pits-----	240	*
3469	Smolan Silty Clay Loam, 1 To 3 Percent Slopes-----	1,625	0.2
3510	Saltcreek-Funmar-Farnum Complex, 1 To 3 Percent Slopes-----	14,104	1.7
3511	Saltcreek And Naron Fine Sandy Loams, 0 To 1 Percent Slopes-----	6,599	0.8
3512	Saltcreek And Naron Fine Sandy Loams, 1 To 3 Percent Slopes-----	31,591	3.9
3520	Saxman Loamy Sand, 0 To 1 Percent Slopes-----	6,299	0.8
3530	Shellabarger, Eroded And Albion Soils, 7 To 15 Percent Slopes-----	5,097	0.6
3531	Shellabarger And Nalim Soils, 3 To 7 Percent Slopes-----	1,605	0.2
3532	Shellabarger Loamy Sand, 0 To 3 Percent Slopes-----	2,674	0.3
3533	Shellabarger Sandy Loam, 0 To 1 Percent Slopes-----	11,405	1.4
3534	Shellabarger Sandy Loam, 1 To 3 Percent Slopes-----	61,715	7.6
3535	Shellabarger-Nalim Complex, 1 To 3 Percent Slopes-----	34,997	4.3
3540	Solvay Loamy Fine Sand, 0 To 2 Percent Slopes-----	7,648	0.9
3550	Spelvin Loamy Sand, 0 To 1 Percent Slopes-----	4,938	0.6
3639	Taver Loam, 0 To 1 Percent Slopes-----	20,848	2.6
3640	Tivin Fine Sand, 10 To 30 Percent Slopes-----	4,778	0.6
3641	Tivin-Dillhut Fine Sands, 0 To 15 Percent Slopes-----	33,530	4.1
3642	Tivin-Willowbrook, Occasionally Flooded, Complex, 0 To 12 Percent Slopes-----	1,171	0.1
3643	Tobin Silt Loam, 0 To 1 Percent Slopes, Occasionally Flooded-----	513	*
3644	Turon-Carway Complex, 0 To 5 Percent Slopes-----	23,438	2.9
3760	Urban Land-Blazefork-Kaskan Complex, 0 To 1 Percent Slopes, Protected-----	1,034	0.1
3762	Urban Land-Darlow-Elmer Complex, 0 To 1 Percent Slopes-----	4,452	0.5
3763	Urban Land-Imano Complex, 0 To 1 Percent Slopes, Protected-----	1,422	0.2
3764	Urban Land-Mahone Complex, 0 To 1 Percent Slopes, Protected-----	1,149	0.1
3765	Urban Land-Saltcreek-Naron Complex, 0 To 1 Percent Slopes-----	1,217	0.1
3766	Urban Land-Saxman Complex, 0 To 1 Percent Slopes, Protected-----	1,075	0.1
3767	Urban Land-Willowbrook Complex, 0 To 1 Percent Slopes, Protected-----	864	0.1
3768	Urban Land-Yaggy Complex, 0 To 1 Percent Slopes, Protected-----	289	*
3900	Warnut Fine Sandy Loam, 0 To 1 Percent Slopes-----	202	*



## ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS--Continued

Reno County, Kansas: Published

Map symbol	Soil name	Acres	Percent
3926	Water-----	11,840	1.5
3966	Willowbrook Fine Sandy Loam, 0 To 1 Percent Slopes, Occasionally Flooded-----	5,840	0.7
4004	Yaggy Fine Sandy Loam, 0 To 1 Percent Slopes-----	7,851	1.0
4005	Yaggy-Saxman Complex, 0 To 2 Percent Slopes, Occasionally Flooded-----	11,994	1.5
4110	Zellmont And Poxmash Sandy Loams, 0 To 3 Percent Slopes-----	6,981	0.9
	Total-----	814,176	100.0

\* Less than 0.1 percent.



Nontechnical Soil Descriptions  
Reno County, Kansas

Nontechnical soil descriptions describe soil properties or management considerations specific to a soil map unit or group of map units, shown in the Nontechnical Descriptions report. These descriptions are written in terminology that Non-technical users of soil survey information can understand. Nontechnical soil descriptions are a powerful tool for creating reports. These high quality, easy to read reports can be generated by conservation planners and other NRCS employees for distribution to land users. Soil map unit descriptions and National Soil Information System records are the basis for these descriptions.

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990 Abbyville Loam, 0 To 1 Percent Slopes

Abbyville soil makes up 95 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level terrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is somewhat poorly drained. The slowest permeability is slow. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 36 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil contains a slightly saline horizon, it has a horizon that is strongly sodic. This soil is in the Saline Subirrigated (pe21-28) range site. This soil is in the irrigated land capability class 3s. It is in the nonirrigated land capability classification 3s.

991 Abbyville-Kisiwa Complex, 0 To 2 Percent Slopes, Flooded

Abbyville, rarely flooded, soil makes up 45 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping terrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is somewhat poorly drained. The slowest permeability is slow. It has a moderate available water capacity and a moderate shrink swell potential. This soil is rarely flooded and is not ponded. The top of the seasonal high water table is at 36 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil contains a slightly saline horizon, it has a horizon that is strongly sodic. This soil is in the Saline Subirrigated (pe21-28) range site. This soil is in the irrigated land capability class 3s. It is in the nonirrigated land capability classification 3s.

Kisiwa, occasionally flooded, soil makes up 40 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley, terrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium over clayey alluvium. This soil is poorly drained. The slowest permeability is very slow. It has a moderate available water capacity and a moderate shrink swell potential. This soil is occasionally flooded and is occasional ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 10 percent calcium carbonate. This soil contains a slightly saline horizon, it has a horizon that is strongly sodic. This soil is in the Saline Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 4s.

1004 Albion Sandy Loam, 0 To 1 Percent Slopes

Albion soil makes up 90 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe21-28) range site. It is in the nonirrigated land capability classification 3e.

1011 Albion-Shellabarger Sandy Loams, 1 To 3 Percent Slopes

Albion soil makes up 70 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping paleoterrace on river valley. The runoff class is low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe21-28) range site. It is in the nonirrigated land capability classification 3e.

Shellabarger soil makes up 30 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping paleoterrace on river valley. The runoff class is low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. It is in the nonirrigated land capability classification 2e.

1057 Aquentes, Frequently Ponded

Aquentes soil makes up 100 percent of the map unit. This map unit is in the This soil occurs on a nearly level depression on paleoterrace on river valley. The runoff class is negligible. The parent material consists of loamy alluvium. This soil is poorly drained. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is frequently ponded. The top of the seasonal high water table is at 8 inches. This soil is in the Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 5w.



Nontechnical Soil Descriptions--Continued  
Reno County, Kansas

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1070 Avans Loam, 0 To 1 Percent Slopes

Avans soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 3 percent calcium carbonate. This soil is in the Loamy Upland (pe21-28) range site. It is in the nonirrigated land capability classification 1.

1071 Avans Loam, 1 To 3 Percent Slopes

Avans soil makes up 85 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping paleoterrace on river valley. The runoff class is low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 3 percent calcium carbonate. This soil is in the Loamy Upland (pe21-28) range site. It is in the nonirrigated land capability classification 1.

1072 Avans Loam, 3 To 7 Percent Slopes

Avans soil makes up 85 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping paleoterrace on river valley. The runoff class is medium. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 3 percent calcium carbonate. This soil is in the Loamy Upland (pe21-28) range site. It is in the nonirrigated land capability classification 2e.

1191 Blazefork Silty Clay Loam, 0 To 1 Percent Slopes, Rarely Flooded

Blazefork soil makes up 90 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is very low. The parent material consists of silty alluvium. This soil is moderately well drained. The slowest permeability is slow. It has a high available water capacity and a moderate shrink swell potential. This soil is rarely flooded and is not ponded. The top of the seasonal high water table is at 48 inches. This soil is in the Clay Lowland (pe25-34) range site. This soil is in the irrigated land capability class 2s. It is in the nonirrigated land capability classification 2w.

1192 Blazefork-Kaskan Complex, 0 To 1 Percent Slopes, Rarely Flooded

Blazefork soil makes up 60 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is very low. The parent material consists of silty alluvium. This soil is moderately well drained. The slowest permeability is slow. It has a high available water capacity and a moderate shrink swell potential. This soil is rarely flooded and is not ponded. The top of the seasonal high water table is at 48 inches. This soil is in the Clay Lowland (pe25-34) range site. This soil is in the irrigated land capability class 2s. It is in the nonirrigated land capability classification 2s.

Kaskan soil makes up 40 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is rarely flooded and is not ponded. The top of the seasonal high water table is at 60 inches. The soil contains a maximum amount of 1 percent calcium carbonate. This soil is in the Loamy Lowland (pe21-28) range site. It is in the nonirrigated land capability classification 2w.

1200 Buhler-Blazefork Silty Clay Loams, 0 To 1 Percent Slopes, Rarely Flooded

Buhler soil makes up 65 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is very low. The parent material consists of alluvium. This soil is somewhat poorly drained. The slowest permeability is very slow. It has a high available water capacity and a low shrink swell potential. This soil is rarely flooded and is not ponded. The top of the seasonal high water table is at 60 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil contains a slightly saline horizon, it has a horizon that is strongly sodic. This soil is in the Saline Subirrigated (pe21-28) range site. This soil is in the irrigated land capability class 2w. It is in the nonirrigated land capability classification 2w.

Blazefork soil makes up 30 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is very low. The parent material consists of silty alluvium. This soil is moderately well drained. The slowest permeability is slow. It has a high available water capacity and a moderate shrink swell potential. This soil is rarely flooded and is not ponded. The top of the seasonal high water table is at 48 inches. This soil is in the Clay Lowland (pe25-34) range site. This soil is in the irrigated land capability class 2s. It is in the nonirrigated land capability classification 2s.



Nontechnical Soil Descriptions--Continued  
Reno County, Kansas

1324 Carway And Carbika Soils, 0 To 1 Percent Slopes

Carway soil makes up 50 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level interdune on depression on paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy eolian deposits over alluvium. This soil is somewhat poorly drained. The slowest permeability is very slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is frequent ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 2w.

Carbika soil makes up 30 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level interdune on depression on paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy eolian deposits over alluvium. This soil is poorly drained. The slowest permeability is very slow. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is frequent ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 2w.

1357 Carway-Dillhut-Solvay Complex, 0 To 2 Percent Slopes

Carway soil makes up 40 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping depression on interdune on paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy eolian deposits over alluvium. This soil is somewhat poorly drained. The slowest permeability is very slow. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is frequent ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 2w.

Solvay soil makes up 30 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping interdune on paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy eolian deposits over alluvium. This soil is somewhat poorly drained. The slowest permeability is moderately slow. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 36 inches. This soil is in the Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 2e.

Dillhut soil makes up 30 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping dune on paleoterrace on river valley. The runoff class is very low. The parent material consists of eolian deposits over alluvium. This soil is moderately well drained. The slowest permeability is very slow. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 18 inches. This soil is in the Sands (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

1359 Clark-Ost Loams, 3 To 7 Percent Slopes

Clark soil makes up 70 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping paleoterrace on river valley. The runoff class is medium. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 45 percent calcium carbonate. This soil is in the Limy Upland (pe21-28) range site. It is in the nonirrigated land capability classification 2c.

Ost soil makes up 30 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping paleoterrace on river valley. The runoff class is medium. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 34 percent calcium carbonate. This soil is in the Loamy Upland (pe24-32) range site. It is in the nonirrigated land capability classification 2c.

1428 Crete Silt Loam, 0 To 1 Percent Slopes

Crete soil makes up 100 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level upland. The runoff class is medium. The parent material consists of silty and clayey loess. This soil is moderately well drained. The slowest permeability is slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Clay Upland (pe25-34) range site. This soil is in the irrigated land capability class 2s. It is in the nonirrigated land capability classification 2s.

1429 Crete Silt Loam, 1 To 3 Percent Slopes

Crete soil makes up 100 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a gently sloping hillslope on upland. The runoff class is low. The parent material consists of silty and clayey loess. This soil is moderately well drained. The slowest permeability is slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Clay Upland (pe25-34) range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.



Nontechnical Soil Descriptions--Continued  
Reno County, Kansas

1553 Darlow-Elmer Complex, 0 To 2 Percent Slopes

Darlow soil makes up 70 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping terrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is somewhat poorly drained. The slowest permeability is very slow. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 2 percent calcium carbonate. This soil contains a moderately saline horizon, it has a horizon that is strongly sodic. This soil is in the Clay Pan (pe21-28) range site. This soil is in the irrigated land capability class 4s. It is in the nonirrigated land capability classification 4s.

Elmer soil makes up 20 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping terrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is moderately well drained. The slowest permeability is slow. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 2 percent calcium carbonate. This soil contains a very slightly saline horizon, it has a horizon that is strongly sodic. This soil is in the Loamy Terrace (pe21-28) range site. This soil is in the irrigated land capability class 3s. It is in the nonirrigated land capability classification 3s.

1554 Dillhut Fine Sand, 1 To 3 Percent Slopes

Dillhut soil makes up 70 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping dune on paleoterrace on river valley. The runoff class is very low. The parent material consists of eolian deposits over alluvium. This soil is moderately well drained. The slowest permeability is very slow. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 18 inches. This soil is in the Sands (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

1555 Dillhut-Plev Complex, 0 To 2 Percent Slopes

Dillhut soil makes up 35 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping dune on paleoterrace on river valley. The runoff class is very low. The parent material consists of eolian deposits over alluvium. This soil is moderately well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

Plev soil makes up 35 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level depression on paleoterrace on river valley, interdune on paleoterrace on river valley. The runoff class is very low. The parent material consists of sandy eolian deposits over loamy alluvium. This soil is poorly drained. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 6 inches. This soil is in the Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 5w.

1556 Dillhut-Solvay Complex, 0 To 3 Percent Slopes

Dillhut soil makes up 30 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping dune on paleoterrace on river valley. The runoff class is very low. The parent material consists of eolian deposits over alluvium. This soil is moderately well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

Solvay soil makes up 30 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping interdune on paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy eolian deposits over alluvium. This soil is somewhat poorly drained. The slowest permeability is moderately slow. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 36 inches. This soil is in the Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 2e.

1725 Farnum And Funmar Loams, 0 To 1 Percent Slopes

Funmar soil makes up 40 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium over alluvium. This soil is moderately well drained. The slowest permeability is slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Loamy Upland (pe21-28) range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2c.



Nontechnical Soil Descriptions--Continued  
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Farnum soil makes up 40 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is very low. The parent material consists of alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Upland (pe21-28) range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2c.

1727 Funmar-Taver Loams, 0 To 2 Percent Slopes

Funmar soil makes up 55 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium over alluvium. This soil is moderately well drained. The slowest permeability is slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Loamy Upland (pe21-28) range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2c.

Taver soil makes up 45 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is very low. The parent material consists of clayey alluvium. This soil is moderately well drained. The slowest permeability is very slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Clay Upland (pe21-28) range site. It is in the nonirrigated land capability classification 2s.

1804 Geary Silt Loam, 1 To 3 Percent Slopes

Geary soil makes up 100 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a gently sloping hillslope on upland. The runoff class is low. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Upland (pe21-28) range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

1807 Geary Silty Clay Loam, 3 To 7 Percent Slopes, Moderately Eroded

Geary, Moderately Eroded, soil makes up 100 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately sloping hillslope on upland. The runoff class is medium. The parent material consists of loess. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Upland (pe25-34) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

1985 Hayes Fine Sandy Loam, 1 To 5 Percent Slopes

Hayes soil makes up 60 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping dune on paleoterrace on river valley. The runoff class is low. The parent material consists of loamy eolian deposits over clayey alluvium. This soil is well drained. The slowest permeability is slow. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

1986 Hayes-Solvay Loamy Fine Sands, 0 To 5 Percent Slopes

Hayes soil makes up 55 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to moderately sloping dune on paleoterrace on river valley. The runoff class is low. The parent material consists of loamy eolian deposits over clayey alluvium. This soil is well drained. The slowest permeability is slow. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

Solvay soil makes up 20 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping interdune on paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy eolian deposits over alluvium. This soil is somewhat poorly drained. The slowest permeability is moderately slow. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 36 inches. This soil is in the Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 2e.



Nontechnical Soil Descriptions--Continued  
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1987 Hayes-Turon Complex, 0 To 5 Percent Slopes

Hayes soil makes up 40 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to moderately sloping dune on paleoterrace on river valley. The runoff class is low. The parent material consists of loamy eolian deposits over clayey alluvium. This soil is well drained. The slowest permeability is slow. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

Turon soil makes up 35 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to moderately sloping dune on paleoterrace on river valley. The runoff class is low. The parent material consists of sandy eolian deposits over alluvium. This soil is well drained. The slowest permeability is very slow. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

2204 Jamash-Piedmont Clay Loams, 0 To 1 Percent Slopes

Jamash soil makes up 50 percent of the map unit. This map unit is in the Central Rolling Red Prairies Major Land Resource Area. This soil occurs on a nearly level pediment on upland. The runoff class is very low. The parent material consists of residuum weathered from shale, unspecified. The soil is 12 to 15 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is very slow. It has a very low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. This soil is in the Shallow Prairie (pe24-32) range site. It is in the nonirrigated land capability classification 4e.

Piedmont soil makes up 50 percent of the map unit. This map unit is in the Central Rolling Red Prairies Major Land Resource Area. This soil occurs on a nearly level pediment on upland. The runoff class is very low. The parent material consists of residuum weathered from shale, clayey. The soil is 32 to 36 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is very slow. It has a low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. This soil is in the Clay Upland (pe24-32) range site. It is in the nonirrigated land capability classification 2e.

2205 Jamash-Piedmont Clay Loams, 1 To 3 Percent Slopes

Jamash soil makes up 60 percent of the map unit. This map unit is in the Central Rolling Red Prairies Major Land Resource Area. This soil occurs on a gently sloping pediment on upland. The runoff class is low. The parent material consists of residuum weathered from shale, unspecified. The soil is 12 to 15 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is very slow. It has a very low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. This soil is in the Shallow Prairie (pe24-32) range site. It is in the nonirrigated land capability classification 4e.

Piedmont soil makes up 40 percent of the map unit. This map unit is in the Central Rolling Red Prairies Major Land Resource Area. This soil occurs on a gently sloping pediment on upland. The runoff class is low. The parent material consists of residuum weathered from shale, clayey. The soil is 32 to 36 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is very slow. It has a low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. This soil is in the Clay Upland (pe24-32) range site. It is in the nonirrigated land capability classification 3e.

2206 Jamash-Piedmont Clay Loams, 3 To 12 Percent Slopes

Jamash soil makes up 60 percent of the map unit. This map unit is in the Central Rolling Red Prairies Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping pediment on upland. The runoff class is high. The parent material consists of residuum weathered from shale, unspecified. The soil is 12 to 15 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is very slow. It has a very low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. This soil is in the Shallow Prairie (pe24-32) range site. It is in the nonirrigated land capability classification 6e.

Piedmont soil makes up 40 percent of the map unit. This map unit is in the Central Rolling Red Prairies Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping pediment on upland. The runoff class is high. The parent material consists of residuum weathered from shale, clayey. The soil is 32 to 36 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is very slow. It has a low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. This soil is in the Clay Upland (pe24-32) range site. It is in the nonirrigated land capability classification 4e.



Nontechnical Soil Descriptions--Continued  
Reno County, Kansas

2207 Jamash Clay Loam, 0 To 8 Percent Slopes

Jamash soil makes up 80 percent of the map unit. This map unit is in the Central Rolling Red Prairies Major Land Resource Area. This soil occurs on a nearly level to strongly sloping pediment on upland. The runoff class is medium. The parent material consists of residuum weathered from shale, unspecified. The soil is 12 to 15 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is very slow. It has a very low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. This soil is in the Shallow Prairie (pe24-32) range site. It is in the nonirrigated land capability classification 6e.

2381 Kanza-Ninnescah Sandy Loams, 0 To 2 Percent Slopes, Commonly Flooded

Kanza soil makes up 50 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is very low. The parent material consists of alluvium. This soil is poorly drained. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is frequently flooded and is not ponded. The top of the seasonal high water table is at 18 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 5w.

Ninnescah soil makes up 50 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is poorly drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 24 inches. The soil contains a maximum amount of 14 percent calcium carbonate. This soil contains a very slightly saline horizon, it has a horizon that is slightly sodic. This soil is in the Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 5w.

2390 Kaskan Loam, 0 To 1 Percent Slopes, Rarely Flooded

Kaskan soil makes up 85 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is rarely flooded and is not ponded. The top of the seasonal high water table is at 60 inches. The soil contains a maximum amount of 1 percent calcium carbonate. This soil is in the Loamy Lowland (pe21-28) range site. It is in the nonirrigated land capability classification 2w.

2391 Kaskan Silty Clay Loam, 0 To 1 Percent Slopes, Frequently Flooded, Channeled

Kaskan soil makes up 75 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderately slow. It has a moderate available water capacity and a low shrink swell potential. This soil is frequently flooded and is not ponded. The top of the seasonal high water table is at 60 inches. The soil contains a maximum amount of 1 percent calcium carbonate. This soil is in the Loamy Lowland (pe21-28) range site. It is in the nonirrigated land capability classification 5w.

2395 Kisiwa Loam, 0 To 1 Percent Slopes

Kisiwa soil makes up 90 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley, terrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium over clayey alluvium. This soil is poorly drained. The slowest permeability is very slow. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and is occasional ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 10 percent calcium carbonate. This soil contains a slightly saline horizon, it has a horizon that is strongly sodic. This soil is in the Saline Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 4s.

2509 Ladysmith Silty Clay Loam, 0 To 1 Percent Slopes

Ladysmith soil makes up 100 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on upland. The runoff class is very low. The parent material consists of clayey alluvium. This soil is somewhat poorly drained. The slowest permeability is very slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 30 inches. The soil contains a maximum amount of 1 percent calcium carbonate. This soil is in the Clay Upland (pe25-34) range site. It is in the nonirrigated land capability classification 2s.

2556 Langdon Fine Sand, 0 To 15 Percent Slopes

Langdon soil makes up 50 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to moderately steep dune on paleoterrace on river valley. The runoff class is medium. The parent material consists of sandy eolian deposits. This soil is somewhat excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Choppy Sands (pe21-28) range site. It is in the nonirrigated land capability classification 6e.



Nontechnical Soil Descriptions--Continued  
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2587 Imano Clay Loam, 0 To 1 Percent Slopes, Occasionally Flooded

Imano soil makes up 85 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is very low. The parent material consists of loamy alluvium over sandy alluvium. This soil is somewhat poorly drained. The slowest permeability is moderately slow. It has a moderate available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 36 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 3w.

2588 Longford Silty Clay Loam, 3 To 7 Percent Slopes, Moderately Eroded

Longford, Moderately Eroded, soil makes up 90 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately sloping hillslope on upland. The runoff class is medium. The parent material consists of silty alluvium or loess. This soil is well drained. The slowest permeability is very slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Upland (pe25-34) range site. It is in the nonirrigated land capability classification 4e.

2812 Mahone Loamy Fine Sand, 0 To 2 Percent Slopes, Rarely Flooded

Mahone soil makes up 95 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is rarely flooded and is not ponded. The top of the seasonal high water table is at 60 inches. The soil contains a maximum amount of 1 percent calcium carbonate. This soil is in the Loamy Lowland (pe21-28) range site. It is in the nonirrigated land capability classification 2w.

2948 Nalim Loam, 0 To 1 Percent Slopes

Nalim soil makes up 80 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Upland (pe24-32) range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

2949 Naron Fine Sandy Loam, 3 To 7 Percent Slopes, Moderately Eroded

Naron, Moderately Eroded, soil makes up 85 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping dune on paleoterrace on river valley. The runoff class is medium. The parent material consists of loamy eolian deposits. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

2950 Naron Fine Sandy Loam, 7 To 15 Percent Slopes, Moderately Eroded

Naron, Moderately Eroded, soil makes up 85 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep dune on paleoterrace on river valley. The runoff class is high. The parent material consists of loamy eolian deposits. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

2951 Nash Silt Loam, 1 To 3 Percent Slopes

Nash soil makes up 90 percent of the map unit. This map unit is in the This soil occurs on a gently sloping interfluvium on upland. The runoff class is low. The parent material consists of residuum weathered from sandstone and siltstone. The soil is 25 to 32 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 2 percent calcium carbonate. This soil is in the Loamy Upland (pe24-32) range site. It is in the nonirrigated land capability classification 3e.

2952 Nash-Lucien Silt Loams, 3 To 7 Percent Slopes

Nash soil makes up 60 percent of the map unit. This map unit is in the This soil occurs on a moderately sloping hillslope on upland. The runoff class is medium. The parent material consists of residuum weathered from sandstone and siltstone. The soil is 25 to 32 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 2 percent calcium carbonate. This soil is in the Loamy Upland (pe24-32) range site. It is in the nonirrigated land capability classification 4e.



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Lucien soil makes up 30 percent of the map unit. This map unit is in the This soil occurs on a moderately sloping hillslope on upland. The runoff class is medium. The parent material consists of residuum weathered from sandstone-siltstone. The soil is 12 to 16 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderate. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 2 percent calcium carbonate. This soil is in the Shallow Prairie (pe24-32) range site. It is in the nonirrigated land capability classification 6e.

2953 Nash-Lucien Silt Loams, 7 To 15 Percent Slopes, Moderately Eroded

Nash, Moderately Eroded, soil makes up 70 percent of the map unit. This map unit is in the This soil occurs on a strongly sloping to moderately steep hillslope on upland. The runoff class is very high. The parent material consists of residuum weathered from sandstone and siltstone. The soil is 25 to 32 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 2 percent calcium carbonate. This soil is in the Loamy Upland (pe24-32) range site. It is in the nonirrigated land capability classification 4e.

Lucien soil makes up 20 percent of the map unit. This map unit is in the This soil occurs on a strongly sloping to moderately steep hillslope on upland. The runoff class is very high. The parent material consists of residuum weathered from sandstone-siltstone. The soil is 12 to 16 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderate. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 2 percent calcium carbonate. This soil is in the Shallow Prairie (pe24-32) range site. It is in the nonirrigated land capability classification 6e.

2955 Nickerson Fine Sandy Loam, 0 To 1 Percent Slopes

Nickerson soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level terrace on river valley. The runoff class is very low. The parent material consists of alluvium. This soil is moderately well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 36 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

2956 Nickerson Loamy Fine Sand, 0 To 2 Percent Slopes

Nickerson soil makes up 85 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping terrace on river valley. The runoff class is very low. The parent material consists of alluvium. This soil is moderately well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 36 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

2957 Nickerson-Punkin Fine Sandy Loams, 0 To 2 Percent Slopes

Nickerson soil makes up 50 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping terrace on river valley. The runoff class is very low. The parent material consists of alluvium. This soil is moderately well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 36 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

Punkin soil makes up 50 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is very low. The parent material consists of clayey alluvium over sandy alluvium. This soil is moderately well drained. The slowest permeability is very slow. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil contains a slightly saline horizon, it has a horizon that is moderately sodic. This soil is in the Saline Subirrigated (pe21-28) range site. This soil is in the irrigated land capability class 3s. It is in the nonirrigated land capability classification 3s.

2958 Ninnescah Fine Sandy Loam, 0 To 1 Percent Slopes, Occasionally Flooded

Ninnescah soil makes up 85 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is poorly drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 24 inches. The soil contains a maximum amount of 14 percent calcium carbonate. This soil contains a very slightly saline horizon, it has a horizon that is slightly sodic. This soil is in the Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 5w.



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2959 Ninnescah Fine Sandy Loam, 0 To 1 Percent Slopes, Occasionally Flooded, Saline

Ninnescah, saline, soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is very low. <parent material is missing> This soil is poorly drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 12 inches. The soil contains a maximum amount of 14 percent calcium carbonate. This soil contains a slightly saline horizon, it has a horizon that is slightly sodic. This soil is in the Saline Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 5s.

3051 Ost Loam, 0 To 1 Percent Slope

Ost soil makes up 90 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 34 percent calcium carbonate. This soil is in the Loamy Upland (pe24-32) range site. It is in the nonirrigated land capability classification 2c.

3052 Ost-Clark Loams, 1 To 3 Percent Slopes

Ost soil makes up 55 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping paleoterrace on river valley. The runoff class is low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 34 percent calcium carbonate. This soil is in the Loamy Upland (pe24-32) range site. It is in the nonirrigated land capability classification 2c.

Clark soil makes up 45 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping paleoterrace on river valley. The runoff class is low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 45 percent calcium carbonate. This soil is in the Limy Upland (pe21-28) range site. It is in the nonirrigated land capability classification 2c.

3170 Penalosa Silt Loam, 0 To 1 Percent Slopes

Penalosa soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is moderately well drained. The slowest permeability is slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Loamy Upland (pe21-28) range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2c.

3171 Penalosa Silt Loam, 1 To 3 Percent Slopes

Penalosa soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping paleoterrace on river valley. The runoff class is low. The parent material consists of loamy alluvium. This soil is moderately well drained. The slowest permeability is slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Loamy Upland (pe21-28) range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2c.

3180 Pratt Fine Sand, 5 To 10 Percent Slopes

Pratt soil makes up 85 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping dune on paleoterrace on river valley. The runoff class is low. The parent material consists of sandy eolian deposits. This soil is well drained. The slowest permeability is rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

3181 Pratt-Turon Fine Sands, 1 To 5 Percent Slopes

Pratt soil makes up 45 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping dune on paleoterrace on river valley. The runoff class is low. The parent material consists of sandy eolian deposits. This soil is well drained. The slowest permeability is rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.



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Turon soil makes up 30 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping dune on paleoterrace on river valley. The runoff class is low. The parent material consists of sandy eolian deposits over alluvium. This soil is well drained. The slowest permeability is very slow. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

3190 Punkin Silt Loam, 0 To 1 Percent Slopes

Punkin soil makes up 90 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is very low. The parent material consists of clayey alluvium. This soil is moderately well drained. The slowest permeability is very slow. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil contains a slightly saline horizon, it has a horizon that is strongly sodic. This soil is in the Clay Pan (pe21-28) range site. This soil is in the irrigated land capability class 3s. It is in the nonirrigated land capability classification 3s.

3191 Punkin-Taver Complex, 0 To 1 Percent Slopes

Punkin soil makes up 70 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is very low. The parent material consists of clayey alluvium. This soil is moderately well drained. The slowest permeability is very slow. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil contains a slightly saline horizon, it has a horizon that is strongly sodic. This soil is in the Clay Pan (pe21-28) range site. This soil is in the irrigated land capability class 3s. It is in the nonirrigated land capability classification 3s.

Taver soil makes up 20 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is very low. The parent material consists of clayey alluvium. This soil is moderately well drained. The slowest permeability is very slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Clay Upland (pe21-28) range site. It is in the nonirrigated land capability classification 2s.

3469 Smolan Silty Clay Loam, 1 To 3 Percent Slopes

Smolan soil makes up 90 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a gently sloping hillslope on upland. The runoff class is low. The parent material consists of loess. This soil is moderately well drained. The slowest permeability is slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Upland (pe25-34) range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

3510 Saltcreek-Funmar-Farnum Complex, 1 To 3 Percent Slopes

Saltcreek soil makes up 50 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping dune on paleoterrace on river valley. The runoff class is low. The parent material consists of loamy eolian deposits over alluvium. This soil is well drained. The slowest permeability is slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 3e.

Funmar soil makes up 30 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping paleoterrace on river valley. The runoff class is low. The parent material consists of loamy alluvium over alluvium. This soil is moderately well drained. The slowest permeability is slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Loamy Upland (pe21-28) range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2c.

Farnum soil makes up 20 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping paleoterrace on river valley. The runoff class is low. The parent material consists of alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Upland (pe21-28) range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2c.

3511 Saltcreek And Naron Fine Sandy Loams, 0 To 1 Percent Slopes

Saltcreek soil makes up 70 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level dune on paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy eolian deposits over alluvium. This soil is well drained. The slowest permeability is slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 3e.



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Naron, sandy substratum, soil makes up 30 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level dune on paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy eolian deposits. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

3512 Saltcreek And Naron Fine Sandy Loams, 1 To 3 Percent Slopes

Saltcreek soil makes up 50 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping dune on paleoterrace on river valley. The runoff class is low. The parent material consists of loamy eolian deposits over alluvium. This soil is well drained. The slowest permeability is slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 1. It is in the nonirrigated land capability classification 3e.

Naron soil makes up 50 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping dune on paleoterrace on river valley. The runoff class is low. The parent material consists of loamy eolian deposits. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

3520 Saxman Loamy Sand, 0 To 1 Percent Slopes

Saxman soil makes up 85 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is very low. The parent material consists of sandy alluvium. This soil is moderately well drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is rarely flooded and is not ponded. The top of the seasonal high water table is at 30 inches. This soil is in the Sandy Lowland (pe21-28) range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 3e.

3530 Shellabarger, Eroded And Albion Soils, 7 To 15 Percent Slopes

Shellabarger, Eroded, soil makes up 45 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep paleoterrace on river valley. The runoff class is very high. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. It is in the nonirrigated land capability classification 2e.

Albion soil makes up 40 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep paleoterrace on river valley. The runoff class is very high. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe21-28) range site. It is in the nonirrigated land capability classification 3e.

3531 Shellabarger And Nalim Soils, 3 To 7 Percent Slopes

Shellabarger, Moderately Eroded, soil makes up 50 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping paleoterrace on river valley. The runoff class is medium. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. It is in the nonirrigated land capability classification 2e.

Nalim soil makes up 50 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a moderately sloping paleoterrace on river valley. The runoff class is medium. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Upland (pe24-32) range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

3532 Shellabarger Loamy Sand, 0 To 3 Percent Slopes

Shellabarger soil makes up 80 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. It is in the nonirrigated land capability classification 2e.



Nontechnical Soil Descriptions--Continued  
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3533 Shellabarger Sandy Loam, 0 To 1 Percent Slopes

Shellabarger soil makes up 85 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. It is in the nonirrigated land capability classification 2e.

3534 Shellabarger Sandy Loam, 1 To 3 Percent Slopes

Shellabarger soil makes up 85 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping paleoterrace on river valley. The runoff class is low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. It is in the nonirrigated land capability classification 2e.

3535 Shellabarger-Nalim Complex, 1 To 3 Percent Slopes

Shellabarger soil makes up 55 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping paleoterrace on river valley. The runoff class is low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. It is in the nonirrigated land capability classification 2e.

Nalim soil makes up 45 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping paleoterrace on river valley. The runoff class is low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Upland (pe24-32) range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

3540 Solvay Loamy Fine Sand, 0 To 2 Percent Slopes

Solvay soil makes up 90 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping interdune on paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy eolian deposits over alluvium. This soil is somewhat poorly drained. The slowest permeability is moderately slow. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 36 inches. This soil is in the Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 2e.

3550 Spelvin Loamy Sand, 0 To 1 Percent Slopes

Spelvin soil makes up 100 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level interdune on paleoterrace on river valley. The runoff class is very low. The parent material consists of eolian deposits over alluvium. This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe21-28) range site. It is in the nonirrigated land capability classification 2e.

3639 Taver Loam, 0 To 1 Percent Slopes

Taver soil makes up 90 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level paleoterrace on river valley. The runoff class is very low. The parent material consists of clayey alluvium. This soil is moderately well drained. The slowest permeability is very slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Clay Upland (pe21-28) range site. It is in the nonirrigated land capability classification 2s.

3640 Tivin Fine Sand, 10 To 30 Percent Slopes

Tivin soil makes up 95 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a strongly sloping to steep dune on paleoterrace on river valley. The runoff class is medium. The parent material consists of sandy eolian deposits. This soil is somewhat excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Choppy Sands (pe21-28) range site. It is in the nonirrigated land capability classification 6e.



Nontechnical Soil Descriptions--Continued  
Reno County, Kansas

3641 Tivin-Dillhut Fine Sands, 0 To 15 Percent Slopes

Tivin soil makes up 45 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping to moderately steep dune on paleoterrace on river valley. The runoff class is medium. The parent material consists of sandy eolian deposits. This soil is somewhat excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Choppy Sands (pe21-28) range site. It is in the nonirrigated land capability classification 6e.

Dillhut soil makes up 40 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to moderately sloping dune on paleoterrace on river valley. The runoff class is very low. The parent material consists of eolian deposits over alluvium. This soil is moderately well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

3642 Tivin-Willowbrook, Occasionally Flooded, Complex, 0 To 12 Percent Slopes

Tivin soil makes up 70 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a gently sloping to strongly sloping dune on flood plain on river valley. The runoff class is very low. The parent material consists of sandy eolian deposits. This soil is somewhat excessively drained. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 66 inches. The soil contains a maximum amount of 3 percent calcium carbonate. This soil is in the Choppy Sands (pe21-28) range site. It is in the nonirrigated land capability classification 6e.

Willowbrook, occasionally flooded, soil makes up 30 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is very low. The parent material consists of loamy alluvium over sandy alluvium. This soil is somewhat poorly drained. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 36 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Subirrigated (pe21-28) range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 3e.

3643 Tobin Silt Loam, 0 To 1 Percent Slopes, Occasionally Flooded

Tobin soil makes up 100 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is very low. The parent material consists of silty alluvium. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a moderate shrink swell potential. This soil is occasionally flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Loamy Lowland (pe25-34) range site. It is in the nonirrigated land capability classification 2w.

3644 Turon-Carway Complex, 0 To 5 Percent Slopes

Turon soil makes up 65 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to moderately sloping dune on paleoterrace on river valley. The runoff class is very low. The parent material consists of sandy eolian deposits over alluvium. This soil is well drained. The slowest permeability is very slow. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands (pe21-28) range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

Carway soil makes up 20 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level interdune on depression on paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy eolian deposits over alluvium. This soil is somewhat poorly drained. The slowest permeability is very slow. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is frequent ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 2w.

3760 Urban Land-Blazefork-Kaskan Complex, 0 To 1 Percent Slopes, Protected

Blazefork, Protected, soil makes up 25 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level stream terrace on river valley. The runoff class is very low. The parent material consists of silty alluvium. This soil is moderately well drained. The slowest permeability is slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 48 inches. This soil is in the Clay Lowland (pe25-34) range site. This soil is in the irrigated land capability class 2s. It is in the nonirrigated land capability classification 2s.

Kaskan, Protected, soil makes up 25 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 60 inches. The soil contains a maximum amount of 1 percent calcium carbonate. This soil is in the Loamy Lowland (pe21-28) range site. It is in the nonirrigated land capability classification 2w.



Nontechnical Soil Descriptions--Continued  
Reno County, Kansas

3762 Urban Land-Darlow-Elmer Complex, 0 To 1 Percent Slopes

Darlow soil makes up 25 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level terrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is somewhat poorly drained. The slowest permeability is very slow. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 2 percent calcium carbonate. This soil contains a moderately saline horizon, it has a horizon that is strongly sodic. This soil is in the Clay Pan (pe21-28) range site. This soil is in the irrigated land capability class 4s. It is in the nonirrigated land capability classification 4s.

Elmer soil makes up 15 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level terrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is moderately well drained. The slowest permeability is slow. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 2 percent calcium carbonate. This soil contains a very slightly saline horizon, it has a horizon that is strongly sodic. This soil is in the Loamy Terrace (pe21-28) range site. This soil is in the irrigated land capability class 3s. It is in the nonirrigated land capability classification 3s.

3763 Urban Land-Imano Complex, 0 To 1 Percent Slopes, Protected

Imano, Protected, soil makes up 40 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is very low. The parent material consists of loamy alluvium over sandy alluvium. This soil is somewhat poorly drained. The slowest permeability is moderately slow. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 36 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil contains a very slightly saline horizon, it has a horizon that is slightly sodic. This soil is in the Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 3w.

3764 Urban Land-Mahone Complex, 0 To 1 Percent Slopes, Protected

Mahone, Protected, soil makes up 35 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. <runoff is missing> The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 60 inches. The soil contains a maximum amount of 1 percent calcium carbonate. This soil is in the Loamy Lowland (pe21-28) range site. It is in the nonirrigated land capability classification 2w.

3765 Urban Land-Saltcreek-Naron Complex, 0 To 1 Percent Slopes

Saltcreek soil makes up 35 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level dune on paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy eolian deposits over alluvium. This soil is well drained. The slowest permeability is slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 3e.

Naron soil makes up 15 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level dune on paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy eolian deposits. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

3766 Urban Land-Saxman Complex, 0 To 1 Percent Slopes, Protected

Saxman, Protected, soil makes up 45 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is very low. The parent material consists of sandy alluvium. This soil is moderately well drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 30 inches. This soil is in the Sandy Lowland (pe21-28) range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 3e.

3767 Urban Land-Willowbrook Complex, 0 To 1 Percent Slopes, Protected

Willowbrook, Protected, soil makes up 45 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is very low. The parent material consists of loamy alluvium over sandy alluvium. This soil is somewhat poorly drained. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 36 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Subirrigated (pe21-28) range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 3e.



Nontechnical Soil Descriptions--Continued  
Reno County, Kansas

3768 Urban Land-Yaggy Complex, 0 To 1 Percent Slopes, Protected

Yaggy, Protected, soil makes up 45 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is very low. The parent material consists of loamy alluvium over sandy alluvium. This soil is somewhat poorly drained. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 36 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy Lowland (pe21-28) range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 3e.

3900 Walnut Fine Sandy Loam, 0 To 1 Percent Slopes

Walnut soil makes up 75 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level depression on paleoterrace on river valley, interdund on paleoterrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium. This soil is poorly drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is frequent ponded. The top of the seasonal high water table is at 0 inches. This soil is in the Subirrigated (pe21-28) range site. It is in the nonirrigated land capability classification 2w.

3966 Willowbrook Fine Sandy Loam, 0 To 1 Percent Slopes, Occasionally Flooded

Willowbrook soil makes up 90 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is very low. The parent material consists of loamy alluvium over sandy alluvium. This soil is somewhat poorly drained. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 36 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Subirrigated (pe21-28) range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 3e.

4004 Yaggy Fine Sandy Loam, 0 To 1 Percent Slopes

Yaggy soil makes up 95 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is very low. The parent material consists of loamy alluvium over sandy alluvium. This soil is somewhat poorly drained. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 36 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy Lowland (pe21-28) range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 3e.

4005 Yaggy-Saxman Complex, 0 To 2 Percent Slopes, Occasionally Flooded

Yaggy soil makes up 60 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is very low. The parent material consists of loamy alluvium over sandy alluvium. This soil is somewhat poorly drained. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 36 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy Lowland (pe21-28) range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 3e.

Saxman soil makes up 30 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is very low. The parent material consists of sandy alluvium. This soil is moderately well drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is rarely flooded and is not ponded. The top of the seasonal high water table is at 30 inches. This soil is in the Sandy Lowland (pe21-28) range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 3e.

4110 Zellmont And Poxmash Sandy Loams, 0 To 3 Percent Slopes

Zellmont soil makes up 70 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping strath terrace on river valley. The runoff class is low. The parent material consists of loamy alluvium over residuum weathered from Permian shale. The soil is 20 to 39 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderately slow. It has a low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 20 percent calcium carbonate. This soil is in the Sandy (pe21-28) range site. It is in the nonirrigated land capability classification 2e.

Poxmash soil makes up 30 percent of the map unit. This map unit is in the Great Bend Sand Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping strath terrace on river valley. The runoff class is low. The parent material consists of alluvium over residuum weathered from Permian shale. The soil is 48 to 53 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy (pe21-28) range site. It is in the nonirrigated land capability classification 3e.



## 990—Abbyville loam, 0 to 1 percent slopes

### Map Unit Composition

Abbyville: 95 percent  
Minor components: 5 percent

### Component Descriptions

#### Abbyville

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Terrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* Moderate (About 7.2 inches)  
*Shrink—swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 24 to 48 inches  
*Runoff class:* Very low  
*Ecological site:* Saline Subirrigated (pe21—28)  
*Land capability (irrigated):* 3s  
*Land capability (nonirrigated):* 3s

#### Typical Profile:

A—0 to 8 inches; loam  
Btknz1—8 to 15 inches; sandy clay loam  
Btknz2—15 to 24 inches; clay loam  
Btknz3—24 to 35 inches; clay loam  
Btknz4—35 to 49 inches; clay loam  
Btkn1—49 to 61 inches; sandy clay loam  
Btkn2—61 to 69 inches; loam  
Btkn3—69 to 80 inches; clay loam

### Minor Components

#### Kisiwa

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Saline Subirrigated (pe21—28)

*General Considerations:* This map unit is poorly suited to the commonly grown crops due to the sodic conditions and wetness. Most areas are used for pasture or range. For areas that are cropped, the hazard of wind or water erosion is slight. Maintaining soil tilth and soil crusting are problems, but they can be improved by adding organic matter. The high sodium content, pH, soluble salts, and water table limit the engineering uses of these soils.

## 991—Abbyville—Kisiwa complex, 0 to 2 percent slopes, flooded

### Map Unit Composition

Abbyville: 45 percent  
Kisiwa: 40 percent  
Minor components: 15 percent

### Component Descriptions

#### Abbyville

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Terrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 0 to 2 percent  
*Drainage class:* Somewhat poorly drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* Moderate (About 7.1 inches)  
*Shrink—swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* Rare  
*Depth to seasonal water saturation:* About 24 to 48 inches  
*Runoff class:* Very low  
*Ecological site:* Saline Subirrigated (pe21—28)  
*Land capability (irrigated):* 3s  
*Land capability (nonirrigated):* 3s

#### Typical Profile:

A—0 to 8 inches; fine sandy loam  
Btknz1—8 to 15 inches; sandy clay loam  
Btknz2—15 to 24 inches; clay loam  
Btknz3—24 to 35 inches; clay loam  
Btknz4—35 to 49 inches; clay loam  
Btkn1—49 to 61 inches; sandy clay loam  
Btkn2—61 to 69 inches; loam  
Btkn3—69 to 80 inches; clay loam

#### Kisiwa

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Flood plain on river valley, terrace on river valley  
*Parent material:* Loamy alluvium over clayey alluvium  
*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Moderate (About 8.7 inches)  
*Shrink—swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* Occasional  
*Ponding hazard:* Occasional



*Depth to seasonal water saturation:* About 0 to 0 inches

*Runoff class:* Very low

*Ecological site:* Saline Subirrigated (pe21—28)

*Land capability (irrigated):*

*Land capability (nonirrigated):* 4s

*Typical Profile:*

Ap1—0 to 4 inches; loam  
 Ap2—4 to 7 inches; loam  
 Btkn—7 to 14 inches; clay loam  
 Btknssg1—14 to 23 inches; clay loam  
 Btknssg2—23 to 31 inches; clay  
 Btknssg3—31 to 40 inches; clay  
 Btknssg4—40 to 46 inches; loam  
 Btkg—46 to 52 inches; fine sandy loam  
 BCg—52 to 58 inches; fine sandy loam  
 Cg—58 to 65 inches; stratified coarse sand to fine sandy loam  
 2C—65 to 80 inches; stratified coarse sand

### Minor Components

#### Saxman

*Composition:* About 10 percent

*Slope:* 0 to 2 percent

*Drainage class:* Moderately well drained

*Ecological site:* Sandy Lowland (pe21—28)

#### Darlow

*Composition:* About 5 percent

*Slope:* 0 to 2 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Clay Pan (pe21—28)

*General Considerations:* This map unit is poorly suited to the commonly grown crops due to the sodic conditions, wetness, and potential flooding. Most areas are used for pasture or range. For areas that are cropped, The hazard of wind erosion is severe on the Abbyville and Saxman soils. Maintaining soil tilth and soil crusting are problems, but they can be improved by adding organic matter. Ephemeral gully erosion potential is high on the Abbyville and Kisiwa soils. The high sodium content, pH, soluble salts, water tables, and flooding limit the engineering of these soils.

## 1004—Albion sandy loam, 0 to 1 percent slopes

### Map Unit Composition

Albion: 90 percent

Minor components: 10 percent

## Component Descriptions

### Albion

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderately rapid (About 2.00 in/hr)

*Available water capacity:* Moderate (About 7.3 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Sandy (pe21—28)

*Land capability (irrigated):*

*Land capability (nonirrigated):* 3e

*Typical Profile:*

Ap—0 to 9 inches; sandy loam  
 Bt1—9 to 16 inches; sandy loam  
 Bt2—16 to 27 inches; sandy loam  
 BC—27 to 48 inches; loamy coarse sand  
 C—48 to 80 inches; sand

### Minor Components

#### Shellabarger

*Composition:* About 10 percent

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Ecological site:* Sandy (pe21—28)

*General Considerations:* Most areas are used as cropland, but some areas are in pasture or range. This map unit is moderately well suited to all of the commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the main crops. The hazard of wind erosion is severe and the hazard of water erosion is slight. Wind erosion can be controlled maintaining plant residue through the use of a conservation tillage system. The moderate water holding capacity can hurt production. This problem can be minimized by increasing organic matter, leaving plant residue, and conservation tillage. In some places, soil test results may show soil reaction (pH) in the strongly acid range. Additions of lime may be required for optimum nutrient balance. The moderately rapid permeability and relatively shallow depths to sandy textures can limit some of the engineering uses of this soil.



## 1011—Albion—Shellabarger sandy loams, 1 to 3 percent slopes

### Map Unit Composition

Albion: 70 percent  
 Shellabarger: 30 percent  
 Minor components:

### Component Descriptions

#### Albion

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 1 to 3 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately rapid (About 2.00 in/hr)  
*Available water capacity:* Moderate (About 7.3 inches)  
*Shrink—swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Sandy (pe21—28)  
*Land capability (irrigated):*  
*Land capability (nonirrigated):* 3e

#### Typical Profile:

Ap—0 to 9 inches; sandy loam  
 Bt1—9 to 16 inches; sandy loam  
 Bt2—16 to 27 inches; sandy loam  
 BC—27 to 48 inches; loamy coarse sand  
 C—48 to 80 inches; sand

#### Shellabarger

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 1 to 3 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Moderate (About 8.5 inches)  
*Shrink—swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Sandy (pe21—28)  
*Land capability (irrigated):*  
*Land capability (nonirrigated):* 2e

#### Typical Profile:

Ap—0 to 7 inches; sandy loam  
 Bt1—7 to 11 inches; sandy clay loam  
 Bt2—11 to 19 inches; sandy clay loam  
 Bt3—19 to 33 inches; sandy loam  
 BC—33 to 47 inches; coarse sandy loam  
 C1—47 to 59 inches; loamy sand  
 C2—59 to 73 inches; sand  
 C3—73 to 80 inches; sand

### Minor Components Unnamed Wet Soils

*General Considerations:* Most areas are used as cropland, but some areas are in pasture or range. This map unit is moderately well suited to all of the commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the main crops. The hazard of wind erosion is severe and the hazard of water erosion is moderate for these soils. Ephemeral gully erosion potential is moderate for these soils. Wind and water erosion can be controlled maintaining plant residue through the use of a conservation tillage system, strip cropping, field windbreaks, contour farming, tall grass barriers, terraces and grassed waterways. The moderate water holding capacity of these soils can limit production. This problem can be minimized by increasing organic matter, leaving plant residue, and conservation tillage. In some places, soil test results may show soil reaction (pH) in the strongly acid range. Additions of lime may be required for optimum nutrient balance. The moderately rapid permeability and relatively shallow depths to sandy textures can limit some of the engineering uses of these soils.

## 1057—Aquents, Frequently Ponded

### Map Unit Composition

Aquents: 100 percent  
 Minor components:

### Component Descriptions

#### Aquents

*MLRA:* —  
*Landform:* Depression on paleoterrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 0 to 1 percent



*Drainage class:* Poorly drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Low (About 3.5 inches)  
*Shrink—swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Ponding hazard:* Frequent  
*Depth to seasonal water saturation:* About 8 to 8 inches  
*Runoff class:* Negligible  
*Ecological site:* Subirrigated (pe21—28)  
*Land capability (irrigated):*  
*Land capability (nonirrigated):* 5w

*Typical Profile:*

Ap—0 to 3 inches; silty clay loam  
 Bg—3 to 8 inches; sandy clay loam  
 3Cg—8 to 12 inches; stratified gravelly coarse sand  
 3C—12 to 80 inches; stratified gravelly coarse sand to sand

*General Considerations:* Most areas are used for recreation or wildlife habitat. This map unit is unsuited to most agricultural and engineering uses due to the potential high water table.

## 1061—Arents, Earthen Dam

### Map Unit Composition

Arents, Earthen Dam: 100 percent  
 Minor components:

## 1062—Arents, loamy

### Component Descriptions

#### Arents, Landfill

*General Considerations:* This area has been used for the county landfill for several years. This area is poorly suited for cropland and most engineering practices. An area of accumulated waste products of human habitation that can be above or below natural ground level.

## 1070—Avans loam, 0 to 1 percent slopes

### Map Unit Composition

Avans: 100 percent  
 Minor components:

### Component Descriptions

#### Avans

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 11.8 inches)  
*Shrink—swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Loamy Upland (pe21—28)  
*Land capability (irrigated):*  
*Land capability (nonirrigated):* 1

*Typical Profile:*

Ap1—0 to 5 inches; loam  
 Ap2—5 to 10 inches; loam  
 BA—10 to 14 inches; loam  
 Bt1—14 to 19 inches; clay loam  
 Bt2—19 to 30 inches; clay loam  
 Bt3—30 to 43 inches; loam  
 Bt4—43 to 53 inches; loam  
 Btk1—53 to 65 inches; silt loam  
 Btk2—65 to 80 inches; loam

#### Minor Components Unnamed Wet Soils

*General Considerations:* Most areas are used as cropland. This mapunit is well suited to all commonly grown crops. Wheat, grain sorghum, and soybeans are the major crops. A few areas are planted to irrigated corn. The hazard of water erosion is slight and wind erosion is moderate. This problem can be overcome by using a conservation tillage and residue management. This mapunit is moderately well suited for most engineering uses.



## 1071—Avans loam, 1 to 3 percent slopes

### Map Unit Composition

Avans: 85 percent  
Minor components: 15 percent

### Component Descriptions

#### Avans

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 11.8 inches)

*Shrink—swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Loamy Upland (pe21—28)

*Land capability (irrigated):*

*Land capability (nonirrigated):* 1

#### Typical Profile:

Ap1—0 to 5 inches; loam  
Ap2—5 to 10 inches; loam  
BA—10 to 14 inches; silt loam  
Bt1—14 to 19 inches; clay loam  
Bt2—19 to 30 inches; loam  
Bt3—30 to 43 inches; loam  
Bt4—43 to 53 inches; silt loam  
Btk1—53 to 65 inches; silt loam  
Btk2—65 to 80 inches; loam

#### Minor Components

##### Ost

*Composition:* About 15 percent

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe24—32)

#### Unnamed Wet Soils

*General Considerations:* Most areas are used as cropland. This mapunit is well suited to all commonly grown crops. Wheat, grain sorghum, and soybeans are the major crops. A few areas are planted to irrigated corn. The hazard of water and wind erosion is moderate. Ephemeral gully erosion potential is moderate in most areas. This problem

can be overcome by using a conservation tillage system, tall grass barriers, contour farming, terraces and waterways, and residue management. This mapunit is moderately well suited for most engineering uses.

## 1072—Avans loam, 3 to 7 percent slopes

### Map Unit Composition

Avans: 85 percent  
Minor components: 15 percent

### Component Descriptions

#### Avans

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 3 to 7 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 11.8 inches)

*Shrink—swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Medium

*Ecological site:* Loamy Upland (pe21—28)

*Land capability (irrigated):*

*Land capability (nonirrigated):* 2e

#### Typical Profile:

Ap1—0 to 5 inches; loam  
Ap2—5 to 10 inches; loam  
BA—10 to 14 inches; silt loam  
Bt1—14 to 19 inches; clay loam  
Bt2—19 to 30 inches; loam  
Bt3—30 to 43 inches; loam  
Bt4—43 to 53 inches; silt loam  
Btk1—53 to 65 inches; silt loam  
Btk2—65 to 80 inches; loam

#### Minor Components

##### Ost

*Composition:* About 15 percent

*Slope:* 3 to 6 percent

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe24—32)

#### Unnamed Wet Soils



*General Considerations:* Most areas are used as cropland, but some are used for pasture or range. This mapunit is moderately well suited to all commonly grown crops. Wheat, grain sorghum, and soybeans are the major crops. The hazard of water erosion is severe and wind erosion is moderate. Ephemeral gully erosion potential is also severe. This problem can be overcome by using a conservation tillage, tall grass barriers, contour farming, terraces and waterways, and residue management. This mapunit is moderately well suited for most engineering uses.

## **1191—Blazefork silty clay loam, 0 to 1 percent slopes, rarely flooded**

### **Map Unit Composition**

Blazefork: 90 percent  
Minor components: 10 percent

### **Component Descriptions**

#### **Blazefork**

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Flood plain on river valley  
*Parent material:* Silty alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 9.3 inches)  
*Shrink—swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* Rare  
*Depth to seasonal water saturation:* About 48 to 48 inches  
*Runoff class:* Very low  
*Ecological site:* Clay Lowland (pe25—34)  
*Land capability (irrigated):* 2s  
*Land capability (nonirrigated):* 2w

#### *Typical Profile:*

Ap1—0 to 3 inches; silty clay loam  
Ap2—3 to 7 inches; silty clay loam  
Bt—7 to 14 inches; silty clay  
Btss—14 to 22 inches; silty clay  
Bt1—22 to 29 inches; silty clay  
Bt2—29 to 34 inches; silty clay  
Bt3—34 to 40 inches; silty clay  
Bt4—40 to 48 inches; silty clay loam  
2Bt5—48 to 61 inches; clay loam  
2Bt6—61 to 80 inches; loam

## **Minor Components**

### **Tobin**

*Composition:* About 10 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Lowland (pe25—34)

## **Unnamed Wet Soils**

*General Considerations:* This map unit is well suited for the commonly grown crops such as wheat and grain sorghum. Most areas are cropped. The hazard of wind and water erosion is slight. The water table and high shrink—swell potential limit the engineering uses of this soil.

## **1192—Blazefork—Kaskan complex, 0 to 1 percent slopes, rarely flooded**

### **Map Unit Composition**

Blazefork: 60 percent  
Kaskan: 40 percent

### **Component Descriptions**

#### **Blazefork**

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Flood plain on river valley  
*Parent material:* Silty alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 9.3 inches)  
*Shrink—swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* Rare  
*Depth to seasonal water saturation:* About 48 to 48 inches  
*Runoff class:* Very low  
*Ecological site:* Clay Lowland (pe25—34)  
*Land capability (irrigated):* 2s  
*Land capability (nonirrigated):* 2s

#### *Typical Profile:*

Ap1—0 to 3 inches; silty clay loam  
Ap2—3 to 7 inches; silty clay loam  
Bt—7 to 14 inches; silty clay  
Btss—14 to 22 inches; silty clay  
Bt1—22 to 29 inches; silty clay  
Bt2—29 to 34 inches; silty clay  
Bt3—34 to 40 inches; silty clay  
Bt4—40 to 48 inches; silty clay loam  
2Bt5—48 to 61 inches; clay loam  
2Bt6—61 to 80 inches; loam



**Kaskan***MLRA: 79 — Great Bend Sand Plains**Landform: Flood plain on river valley**Parent material: Loamy alluvium**Slope: 0 to 1 percent**Drainage class: Well drained**Slowest permeability: Moderate (About 0.60 in/hr)**Available water capacity: Moderate (About 8.7 inches)**Shrink—swell potential: Moderate (About 4.5 LEP)**Flooding hazard: Rare**Depth to seasonal water saturation: About 60 to 60 inches**Runoff class: Very low**Ecological site: Loamy Lowland (pe21—28)**Land capability (irrigated):**Land capability (nonirrigated): 2w**Typical Profile:*

Ap—0 to 7 inches; loam

A—7 to 17 inches; clay loam

Bw1—17 to 24 inches; loam

Bw2—24 to 35 inches; fine sandy loam

BC—35 to 41 inches; loamy fine sand

C1—41 to 47 inches; fine sand

C2—47 to 66 inches; sand

C3—66 to 80 inches; stratified gravelly coarse sand to sand

**Minor Components****Unnamed Wet Soils**

*General Considerations:* Most areas are in cropland, but some are in pasture or range. This mapunit is moderately—well suited for the most commonly grown crops. Wheat and grain sorghum are the predominant crops grown. The hazard for wind and water erosion is slight. The presence of water tables and high shrink—swell potential will limit some of the engineering uses for this mapunit.

## **1200—Buhler—Blazefork silty clay loams, 0 to 1 percent slopes, rarely flooded**

**Map Unit Composition**

Buhler: 65 percent

Blazefork: 30 percent

Minor components: 5 percent

**Component Descriptions****Buhler***MLRA: 79 — Great Bend Sand Plains**Landform: Flood plain on river valley**Parent material: Alluvium**Slope: 0 to 1 percent**Drainage class: Somewhat poorly drained**Slowest permeability: Very slow (About 0.00 in/hr)**Available water capacity: High (About 10.4 inches)**Shrink—swell potential: High (About 7.5 LEP)**Flooding hazard: Rare**Depth to seasonal water saturation: About 60 to 60 inches**Runoff class: Very low**Ecological site: Saline Subirrigated (pe21—28)**Land capability (irrigated): 2w**Land capability (nonirrigated): 2w**Typical Profile:*

Ay—0 to 3 inches; silty clay loam

Anyz—3 to 8 inches; silty clay loam

Eny—8 to 12 inches; silt loam

Btmy1—12 to 16 inches; silt loam

Btmy2—16 to 24 inches; clay loam

Btkny—24 to 36 inches; silty clay loam

Btknyss—36 to 42 inches; silty clay loam

Bknyss—42 to 50 inches; clay

2Bkss—50 to 58 inches; clay loam

2C1—58 to 76 inches; fine sandy loam

2C2—76 to 80 inches; loam

**Blazefork***MLRA: 79 — Great Bend Sand Plains**Landform: Flood plain on river valley**Parent material: Silty alluvium**Slope: 0 to 1 percent**Drainage class: Moderately well drained**Slowest permeability: Slow (About 0.06 in/hr)**Available water capacity: High (About 9.3 inches)**Shrink—swell potential: High (About 7.5 LEP)**Flooding hazard: Rare**Depth to seasonal water saturation: About 48 to 48 inches**Runoff class: Very low**Ecological site: Clay Lowland (pe25—34)**Land capability (irrigated): 2s**Land capability (nonirrigated): 2s**Typical Profile:*

Ap1—0 to 3 inches; silty clay loam

Ap2—3 to 7 inches; silty clay loam

Bt—7 to 14 inches; silty clay

Btss—14 to 22 inches; silty clay

Bt1—22 to 29 inches; silty clay

Bt2—29 to 34 inches; silty clay

Bt3—34 to 40 inches; silty clay



Bt4—40 to 48 inches; silty clay loam  
 2Bt5—48 to 61 inches; clay loam  
 2Bt6—61 to 80 inches; loam

### Minor Components

#### Tobin

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Lowland (pe25—34)

### Unnamed Wet Soils

*General Considerations:* This map unit is somewhat poorly suited for the commonly grown crops such as wheat and grain sorghum, due to the sodic conditions and soluble salts. Most areas are cropped. The hazard of wind and water erosion is slight. Maintaining soil tilth and soil surface crusting are problems on the Buhler soils, but they can be improved by adding organic matter. the high sodium content, soluble salts, water tables, and high shrink—swell capacity limit most engineering uses, particularly in the area of the Buhler soils.

## 1324—Carway And Carbika Soils, 0 to 1 percent slopes

### Map Unit Composition

Carway: 50 percent  
 Carbika: 30 percent  
 Minor components: 20 percent

### Component Descriptions

#### Carway

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Interdune on depression on paleoterrace on river valley  
*Parent material:* Loamy eolian deposits over alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* High (About 9.0 inches)  
*Shrink—swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Ponding hazard:* Frequent  
*Depth to seasonal water saturation:* About 0 to 0 inches  
*Runoff class:* Very low

*Ecological site:* Subirrigated (pe21—28)  
*Land capability (irrigated):*  
*Land capability (nonirrigated):* 2w

#### Typical Profile:

Ap—0 to 7 inches; fine sandy loam  
 Bt1—7 to 10 inches; sandy clay loam  
 Bt2—10 to 15 inches; sandy clay loam  
 Bt3—15 to 22 inches; fine sandy loam  
 Bt4—22 to 35 inches; fine sandy loam  
 2Btb1—35 to 40 inches; clay loam  
 2Btb2—40 to 54 inches; clay loam  
 2Btb3—54 to 63 inches; clay loam  
 2Btb4—63 to 72 inches; clay loam  
 2Btkb—72 to 80 inches; clay loam

#### Carbika

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Interdune on depression on paleoterrace on river valley  
*Parent material:* Loamy eolian deposits over alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* High (About 9.6 inches)  
*Shrink—swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Ponding hazard:* Frequent  
*Depth to seasonal water saturation:* About 0 to 0 inches  
*Runoff class:* Very low  
*Ecological site:* Subirrigated (pe21—28)  
*Land capability (irrigated):*  
*Land capability (nonirrigated):* 2w

#### Typical Profile:

A—0 to 11 inches; silt loam  
 Bt1—11 to 15 inches; clay  
 Bt2—15 to 22 inches; clay loam  
 Bt3—22 to 34 inches; clay loam  
 Bt4—34 to 41 inches; clay loam  
 Bt5—41 to 60 inches; clay loam  
 Btk—60 to 80 inches; clay loam

### Minor Components

#### Solvay

*Composition:* About 20 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are in cropland but, some are in pasture or range. This mapunit is poorly suited for the most commonly grown crops. Wheat and grain sorghum are the predominant crops. The hazard for wind and water erosion is slight.



The presence of water tables and potential for high shrink—swell limit most engineering uses for this mapunit.

## **1357—Carway—Dillhut—Solvay complex, 0 to 2 percent slopes**

### **Map Unit Composition**

Carway: 40 percent  
Solvay: 30 percent  
Dillhut: 30 percent

### **Component Descriptions**

#### **Carway**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Depression on interdune on paleoterrace on river valley

*Parent material:* Loamy eolian deposits over alluvium

*Slope:* 0 to 2 percent

*Drainage class:* Somewhat poorly drained

*Slowest permeability:* Very slow (About 0.00 in/hr)

*Available water capacity:* Moderate (About 8.6 inches)

*Shrink—swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

*Ponding hazard:* Frequent

*Depth to seasonal water saturation:* About 0 to 0 inches

*Runoff class:* Very low

*Ecological site:* Subirrigated (pe21—28)

*Land capability (irrigated):*

*Land capability (nonirrigated):* 2w

#### *Typical Profile:*

Ap—0 to 7 inches; loamy fine sand  
Bt1—7 to 10 inches; sandy clay loam  
Bt2—10 to 15 inches; sandy clay loam  
Bt3—15 to 22 inches; fine sandy loam  
Bt4—22 to 35 inches; fine sandy loam  
2Btb1—35 to 40 inches; clay loam  
2Btb2—40 to 54 inches; clay loam  
2Btb3—54 to 63 inches; clay loam  
2Btb4—63 to 72 inches; clay loam  
2Btkb—72 to 80 inches; clay loam

#### **Solvay**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Interdune on paleoterrace on river valley

*Parent material:* Loamy eolian deposits over alluvium

*Slope:* 0 to 2 percent

*Drainage class:* Somewhat poorly drained

*Slowest permeability:* Moderately slow (About 0.20 in/hr)

*Available water capacity:* High (About 9.2 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* About 24 to 48 inches

*Runoff class:* Very low

*Ecological site:* Subirrigated (pe21—28)

*Land capability (irrigated):*

*Land capability (nonirrigated):* 2e

#### *Typical Profile:*

A—0 to 5 inches; loamy fine sand  
2Bt1—5 to 14 inches; fine sandy loam  
2Bt2—14 to 23 inches; fine sandy loam  
2Bt3—23 to 37 inches; fine sandy loam  
2BC1—37 to 58 inches; fine sandy loam  
2BC2—58 to 76 inches; loamy fine sand  
2BC3—76 to 80 inches; loamy fine sand

#### **Dillhut**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Eolian deposits over alluvium

*Slope:* 0 to 2 percent

*Drainage class:* Moderately well drained

*Slowest permeability:* Very slow (About 0.00 in/hr)

*Available water capacity:* Moderate (About 6.1 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* About 18 to 18 inches

*Runoff class:* Very low

*Ecological site:* Sands (pe21—28)

*Land capability (irrigated):* 3e

*Land capability (nonirrigated):* 3e

#### *Typical Profile:*

A—0 to 10 inches; fine sand  
C—10 to 29 inches; fine sand  
2Btb1—29 to 35 inches; fine sandy loam  
2Btb2—35 to 43 inches; fine sandy loam  
3Btb3—43 to 54 inches; clay loam  
3Btb4—54 to 66 inches; clay loam  
3Btkb—66 to 80 inches; clay loam

### **Minor Components**

#### **Carbika**

*Composition:* About

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are used for pasture or range, some areas are used for cropland. This mapunit is poorly suited



for the most commonly grown crops. Wheat, grain sorghum and alfalfa are the predominant crops. The hazard for wind erosion is severe and water erosion is slight. Wind erosion can be controlled by plant residue management, conservation tillage, and tall grass barriers. The presence of high water tables will limit most engineering uses for this mapunit.

## 1359—Clark—Ost loams, 3 to 7 percent slopes

### Map Unit Composition

Clark: 70 percent  
Ost: 30 percent

### Component Descriptions

#### Clark

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 3 to 7 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 10.4 inches)

*Shrink—swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Medium

*Ecological site:* Limy Upland (pe21—28)

*Land capability (irrigated):*

*Land capability (nonirrigated):* 2c

#### Typical Profile:

Ap—0 to 11 inches; loam

Bw—11 to 16 inches; loam

Bk1—16 to 28 inches; loam

Bk2—28 to 45 inches; fine sandy loam

Bck1—45 to 65 inches; fine sandy loam

Ck2—65 to 80 inches; very fine sandy loam

#### Ost

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 3 to 6 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderately slow (About 0.20 in/hr)

*Available water capacity:* High (About 10.0 inches)

*Shrink—swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Medium

*Ecological site:* Loamy Upland (pe24—32)

*Land capability (irrigated):*

*Land capability (nonirrigated):* 2c

#### Typical Profile:

Ap—0 to 8 inches; loam

Bt1—8 to 12 inches; loam

Bt2—12 to 18 inches; loam

Bk1—18 to 23 inches; clay loam

Bk2—23 to 38 inches; clay loam

Bck—38 to 54 inches; loam

C—54 to 80 inches; loam

### Minor Components

#### Unnamed Wet Soils

*General Considerations:* Most areas are used as pasture or rangeland. Some areas are used as cropland. The hazard of wind and water erosion is moderately severe. This mapunit is well suited for most engineering practices. The slopes and amount of calcium carbonates can limit some practices.

## 1428—Crete silt loam, 0 to 1 percent slopes

### Map Unit Composition

Crete: 100 percent

### Component Descriptions

#### Crete

*MLRA:* 75 — Central Loess Plains

*Landform:* Upland

*Parent material:* Silty and clayey loess

*Slope:* 0 to 1 percent

*Drainage class:* Moderately well drained

*Slowest permeability:* Slow (About 0.06 in/hr)

*Available water capacity:* High (About 10.9 inches)

*Shrink—swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Medium

*Ecological site:* Clay Upland (pe25—34)



*Land capability (irrigated): 2s*  
*Land capability (nonirrigated): 2s*

**Typical Profile:**

Ap—0 to 5 inches; silt loam  
 BA—5 to 9 inches; silty clay loam  
 Bt1—9 to 19 inches; silty clay loam  
 Bt2—19 to 27 inches; silty clay  
 Bt3—27 to 38 inches; silty clay  
 BC—38 to 48 inches; silty clay loam  
 C—48 to 80 inches; silty clay loam

**Minor Components**

**Unnamed Wet Soils**

*Phase: CLAYEY, DRAINAGEWAY*

**Unnamed Wet Soils**

*Phase: CLAYEY, DEPRESSION*

*General Considerations:* Most areas are used as cropland. This mapunit is well suited to all commonly grown crops. Wheat, grain sorghum, and soybeans are the major crops. A few areas are planted to irrigated corn. The hazard of water erosion is slight and wind erosion is moderate. This problem can be overcome by using a conservation tillage and residue management. This mapunit is moderately well suited for most engineering uses.

**1429—Crete silt loam, 1 to 3 percent slopes**

**Map Unit Composition**

Crete: 100 percent

**Component Descriptions**

**Crete**

*MLRA:* 75 — Central Loess Plains  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey loess  
*Slope:* 1 to 3 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 10.9 inches)  
*Shrink—swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Clay Upland (pe25—34)  
*Land capability (irrigated): 2e*  
*Land capability (nonirrigated): 2e*

**Typical Profile:**

Ap—0 to 5 inches; silt loam  
 BA—5 to 9 inches; silty clay loam  
 Bt1—9 to 19 inches; silty clay  
 Bt2—19 to 27 inches; silty clay  
 Bt3—27 to 38 inches; silty clay  
 BC—38 to 48 inches; silty clay loam  
 C—48 to 80 inches; silt loam

**Minor Components**

**Unnamed Wet Soils**

*General Considerations:* Most areas are used as cropland. This mapunit is well suited to all commonly grown crops. Wheat, grain sorghum, and soybeans are the major crops. A few areas are planted to irrigated corn. The hazard of water and wind erosion is moderate. Ephemeral gully erosion potential is moderate in most areas. This problem can be overcome by using a conservation tillage, tall grass barriers, contour farming, terraces and waterways, and residue management. This mapunit is moderately well suited for most engineering uses. The high clay content and shrink—swell may limit some practices.

**1553—Darlow—Elmer complex, 0 to 2 percent slopes**

**Map Unit Composition**

Darlow: 70 percent  
 Elmer: 20 percent  
 Minor components: 10 percent

**Component Descriptions**

**Darlow**

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Terrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 0 to 2 percent  
*Drainage class:* Somewhat poorly drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Moderate (About 7.6 inches)  
*Shrink—swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low



*Ecological site:* Clay Pan (pe21—28)

*Land capability (irrigated):* 4s

*Land capability (nonirrigated):* 4s

*Typical Profile:*

Ap1—0 to 5 inches; loam  
 Ap2—5 to 8 inches; loam  
 Btn—8 to 14 inches; loam  
 Btny—14 to 20 inches; clay loam  
 Btknyz—20 to 26 inches; loam  
 Btnz1—26 to 33 inches; loam  
 Btnz2—33 to 44 inches; loam  
 Btn1—44 to 53 inches; loam  
 Btn2—53 to 68 inches; loam  
 2Btn3—68 to 80 inches; sandy loam

**Elmer**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Terrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 0 to 2 percent

*Drainage class:* Moderately well drained

*Slowest permeability:* Slow (About 0.06 in/hr)

*Available water capacity:* High (About 9.1 inches)

*Shrink—swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Loamy Terrace (pe21—28)

*Land capability (irrigated):* 3s

*Land capability (nonirrigated):* 3s

*Typical Profile:*

Ap1—0 to 6 inches; fine sandy loam  
 Ap2—6 to 9 inches; fine sandy loam  
 AB—9 to 19 inches; fine sandy loam  
 Btn1—19 to 26 inches; fine sandy loam  
 Btn2—26 to 37 inches; fine sandy loam  
 Btnk1—37 to 43 inches; loam  
 Btnk2—43 to 51 inches; clay loam  
 Btnk3—51 to 61 inches; fine sandy loam  
 Btn1'—61 to 72 inches; fine sandy loam  
 Btn2'—72 to 80 inches; fine sandy loam

**Minor Components**

**Punkin**

*Composition:* About 10 percent

*Slope:* 0 to 2 percent

*Drainage class:* Moderately well drained

*Ecological site:* Clay Pan (pe21—28)

**Carway**

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Subirrigated (pe21—28)

**Carbika**

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are in cropland, but some are in pasture or range. This mapunit is moderately well suited for the most commonly grown crops. Wheat and grain sorghum are the major crops. The hazard for wind erosion is severe and water erosion is slight. Maintaining soil tilth and soil crusting are problems but they can be improved by adding organic matter. The high sodium content, pH, and soluble salts can limit the engineering uses of this mapunit.

**1554—Dillhut fine sand, 1 to 3 percent slopes**

**Map Unit Composition**

Dillhut: 70 percent

Minor components: 30 percent

**Component Descriptions**

**Dillhut**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Eolian deposits over alluvium

*Slope:* 1 to 3 percent

*Drainage class:* Moderately well drained

*Slowest permeability:* Very slow (About 0.00 in/hr)

*Available water capacity:* Moderate (About 6.1 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* About 18 to 18 inches

*Runoff class:* Very low

*Ecological site:* Sands (pe21—28)

*Land capability (irrigated):* 3e

*Land capability (nonirrigated):* 3e

*Typical Profile:*

A—0 to 10 inches; fine sand  
 C—10 to 29 inches; fine sand  
 2Btb1—29 to 35 inches; fine sandy loam  
 2Btb2—35 to 43 inches; fine sandy loam  
 3Btb3—43 to 54 inches; clay loam  
 3Btb4—54 to 66 inches; clay loam  
 3Btkb—66 to 80 inches; clay loam

**Minor Components**

**Dillwyn**

*Composition:* About 30 percent

*Slope:* 1 to 3 percent

*Drainage class:* Somewhat poorly drained



*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are in pasture or range. Some areas are in cropland. This mapunit is poorly suited for most commonly grown crops. The hazard for wind erosion is severe and water erosion is slight. The presence of water tables and sandy textures limits many of the engineering uses of this soil.

## 1555—Dillhut—Plev complex, 0 to 2 percent slopes

### Map Unit Composition

Dillhut: 35 percent  
Plev: 35 percent  
Minor components: 30 percent

### Component Descriptions

#### Dillhut

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Eolian deposits over alluvium  
*Slope:* 0 to 2 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Moderate (About 6.0 inches)  
*Shrink—swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Sands (pe21—28)  
*Land capability (irrigated):* 3e  
*Land capability (nonirrigated):* 3e

#### Typical Profile:

A—0 to 4 inches; fine sand  
AC—4 to 9 inches; fine sand  
C1—9 to 18 inches; fine sand  
C2—18 to 26 inches; fine sand  
2Btb1—26 to 41 inches; fine sandy loam  
2Btb2—41 to 55 inches; fine sandy loam  
2BCb1—55 to 65 inches; fine sandy loam  
2BCb2—65 to 70 inches; fine sandy loam  
2Cg—70 to 80 inches; fine sandy loam

#### Plev

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Depression on paleoterrace on river valley, interdune on paleoterrace on river valley

*Parent material:* Sandy eolian deposits over loamy alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* Low (About 3.9 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* About 6 to 6 inches

*Runoff class:* Very low

*Ecological site:* Subirrigated (pe21—28)

*Land capability (irrigated):*

*Land capability (nonirrigated):* 5w

#### Typical Profile:

A1—0 to 4 inches; loamy fine sand  
A2—4 to 12 inches; fine sand  
Cg1—12 to 35 inches; fine sand  
Cg2—35 to 46 inches; fine sand  
2Btgb1—46 to 57 inches; fine sandy loam  
2Btgb2—57 to 75 inches; fine sandy loam  
2BCb—75 to 80 inches; loamy fine sand

### Minor Components

#### Dillwyn

*Composition:* About 20 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Subirrigated (pe21—28)

#### Warnut

*Composition:* About 10 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are in pasture or range. This mapunit is poorly suited for most commonly grown crops. The hazard for wind erosion is severe and water erosion is slight. The presence of water tables and sandy textures limits many of the engineering uses of this soil.

## 1556—Dillhut—Solvay complex, 0 to 3 percent slopes

### Map Unit Composition

Dillhut: 30 percent  
Solvay: 30 percent  
Minor components: 40 percent



## Component Descriptions

### Dillhut

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Eolian deposits over alluvium

*Slope:* 0 to 3 percent

*Drainage class:* Moderately well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* Moderate (About 6.0 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Sands (pe21—28)

*Land capability (irrigated):* 3e

*Land capability (nonirrigated):* 3e

#### Typical Profile:

A—0 to 4 inches; fine sand

AC—4 to 9 inches; fine sand

C1—9 to 18 inches; fine sand

C2—18 to 26 inches; fine sand

2Btb1—26 to 41 inches; fine sandy loam

2Btb2—41 to 55 inches; fine sandy loam

2BCb1—55 to 65 inches; fine sandy loam

2BCb2—65 to 70 inches; fine sandy loam

2Cg—70 to 80 inches; fine sandy loam

### Solvay

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Interdune on paleoterrace on river valley

*Parent material:* Loamy eolian deposits over alluvium

*Slope:* 0 to 2 percent

*Drainage class:* Somewhat poorly drained

*Slowest permeability:* Moderately slow (About 0.20 in/hr)

*Available water capacity:* High (About 9.2 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* About 24 to 48 inches

*Runoff class:* Very low

*Ecological site:* Subirrigated (pe21—28)

*Land capability (irrigated):*

*Land capability (nonirrigated):* 2e

#### Typical Profile:

A—0 to 5 inches; fine sandy loam

2Bt1—5 to 14 inches; fine sandy loam

2Bt2—14 to 23 inches; fine sandy loam

2Bt3—23 to 37 inches; fine sandy loam

2BC1—37 to 58 inches; fine sandy loam

2BC2—58 to 76 inches; loamy fine sand

2BC3—76 to 80 inches; loamy fine sand

## Minor Components

### Dillwyn

*Composition:* About 25 percent

*Slope:* 0 to 2 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Subirrigated (pe21—28)

### Carway

*Composition:* About 15 percent

*Slope:* 0 to 2 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are in pasture or range. This mapunit is poorly suited for most commonly grown crops. The hazard for wind erosion is severe and water erosion is slight. The presence of water tables and sandy textures limits many of the engineering uses of this soil.

## 1725—Farnum And Funmar loams, 0 to 1 percent slopes

## Map Unit Composition

Funmar: 40 percent

Farnum: 40 percent

Minor components: 20 percent

## Component Descriptions

### Funmar

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium over alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Moderately well drained

*Slowest permeability:* Slow (About 0.06 in/hr)

*Available water capacity:* High (About 10.3 inches)

*Shrink—swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Loamy Upland (pe21—28)

*Land capability (irrigated):* 1

*Land capability (nonirrigated):* 2c

#### Typical Profile:

Ap—0 to 6 inches; loam

A—6 to 12 inches; loam

Bt1—12 to 17 inches; loam



Bt2—17 to 26 inches; clay loam  
 Bt3—26 to 32 inches; loam  
 2Ab—32 to 38 inches; silty clay loam  
 2Btb—38 to 54 inches; silty clay loam  
 2Btkb1—54 to 66 inches; silty clay loam  
 2Btkb2—66 to 80 inches; silty clay loam

### **Farnum**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 10.7 inches)

*Shrink—swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Loamy Upland (pe21—28)

*Land capability (irrigated):* 1

*Land capability (nonirrigated):* 2c

#### *Typical Profile:*

Ap—0 to 5 inches; loam  
 A—5 to 15 inches; loam  
 Bt1—15 to 21 inches; loam  
 Bt2—21 to 34 inches; sandy clay loam  
 Bt3—34 to 48 inches; loam  
 Bt4—48 to 61 inches; clay loam  
 Bt5—61 to 73 inches; clay loam  
 Btk—73 to 80 inches; loam

### **Minor Components**

#### **Naron**

*Composition:* About 20 percent

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Ecological site:* Sandy (pe21—28)

#### **Carway**

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Subirrigated (pe21—28)

#### **Carbika**

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are in cropland, but some areas are in pasture or range. This mapunit is well suited for the most commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the predominant crops grown. The hazard for wind and water erosion is slight. The

potential for high shrink—swell may limit some of the engineering practices of this mapunit.

## **1727—Funmar—Taver loams, 0 to 2 percent slopes**

### **Map Unit Composition**

Funmar: 55 percent

Taver: 45 percent

### **Component Descriptions**

#### **Funmar**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium over alluvium

*Slope:* 0 to 2 percent

*Drainage class:* Moderately well drained

*Slowest permeability:* Slow (About 0.06 in/hr)

*Available water capacity:* High (About 10.3 inches)

*Shrink—swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Loamy Upland (pe21—28)

*Land capability (irrigated):* 1

*Land capability (nonirrigated):* 2c

#### *Typical Profile:*

Ap—0 to 6 inches; loam  
 A—6 to 12 inches; loam  
 Bt1—12 to 17 inches; loam  
 Bt2—17 to 26 inches; clay loam  
 Bt3—26 to 32 inches; loam  
 2Ab—32 to 38 inches; silty clay loam  
 2Btb—38 to 54 inches; silty clay loam  
 2Btkb1—54 to 66 inches; silty clay loam  
 2Btkb2—66 to 80 inches; silty clay loam

#### **Taver**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Clayey alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Moderately well drained

*Slowest permeability:* Very slow (About 0.00 in/hr)

*Available water capacity:* High (About 9.4 inches)

*Shrink—swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None



*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Clay Upland (pe21—28)

*Land capability (irrigated):*

*Land capability (nonirrigated):* 2s

*Typical Profile:*

Ap—0 to 7 inches; loam  
2Bt1—7 to 17 inches; silty clay loam  
2Bt2—17 to 33 inches; silty clay  
2Btk1—33 to 53 inches; silty clay loam  
2Btk2—53 to 64 inches; clay loam  
3Bt—64 to 80 inches; sandy clay loam

### Minor Components

#### Carbika

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are in cropland, but some areas are in pasture or range. This mapunit is well suited for the most commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the predominant crops grown. The hazard for wind and water erosion is slight. The potential for high shrink—swell may limit some of the engineering practices of this mapunit.

## 1804—Geary silt loam, 1 to 3 percent slopes

### Map Unit Composition

Geary: 100 percent

### Component Descriptions

#### Geary

*MLRA:* 75 — Central Loess Plains

*Landform:* Hillslope on upland

*Parent material:* Loess

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 11.0 inches)

*Shrink—swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Loamy Upland (pe21—28)

*Land capability (irrigated):* 2e

*Land capability (nonirrigated):* 2e

*Typical Profile:*

Ap—0 to 6 inches; silt loam  
BA—6 to 14 inches; silt loam  
Bt1—14 to 25 inches; silty clay loam  
Bt2—25 to 37 inches; silty clay loam  
BC—37 to 51 inches; silty clay loam  
C—51 to 80 inches; silty clay loam

### Minor Components

#### Unnamed Wet Soils

*General Considerations:* Most areas are used as cropland. This mapunit is well suited to all commonly grown crops. Wheat, grain sorghum, and soybeans are the major crops. A few areas are planted to irrigated corn. The hazard of water and wind erosion is moderate. Ephemeral gully erosion potential is moderate in most areas. This problem can be overcome by using a conservation tillage, tall grass barriers, contour farming, terraces and waterways, and residue management. This mapunit is moderately well suited for most engineering uses. The high clay content and shrink swell may limit some practices.

## 1807—Geary silty clay loam, 3 to 7 percent slopes, moderately eroded

### Map Unit Composition

Geary: 100 percent

### Component Descriptions

#### Geary

*MLRA:* 75 — Central Loess Plains

*Landform:* Hillslope on upland

*Parent material:* Loess

*Slope:* 3 to 7 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderately slow (About 0.20 in/hr)

*Available water capacity:* High (About 11.7 inches)

*Shrink—swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Medium



*Ecological site:* Loamy Upland (pe25—34)

*Land capability (irrigated):* 3e

*Land capability (nonirrigated):* 3e

*Typical Profile:*

Ap—0 to 5 inches; silty clay loam  
Bt1—5 to 19 inches; silty clay loam  
Bt2—19 to 43 inches; silty clay loam  
BC—43 to 50 inches; silt loam  
C—50 to 80 inches; silt loam

**Minor Components**

**Unnamed Wet Soils**

*General Considerations:* Most areas are used as cropland, but some are used for pasture or range. This mapunit is moderately well suited to all commonly grown crops. Wheat, grain sorghum, and soybeans are the major crops. The hazard of water erosion is severe and wind erosion is moderate. Ephemeral gully erosion potential is also severe. This problem can be overcome by using a conservation tillage, tall grass barriers, contour farming, terraces and waterways, and residue management. This mapunit is moderately well suited for most engineering uses, but is limited by high clay content and potential for shrink swell.

**1985—Hayes fine sandy loam, 1 to 5 percent slopes**

**Map Unit Composition**

Hayes: 60 percent

Minor components: 40 percent

**Component Descriptions**

**Hayes**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Loamy eolian deposits over clayey alluvium

*Slope:* 1 to 5 percent

*Drainage class:* Well drained

*Slowest permeability:* Slow (About 0.06 in/hr)

*Available water capacity:* Moderate (About 8.1 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Sandy (pe21—28)

*Land capability (irrigated):* 3e

*Land capability (nonirrigated):* 3e

*Typical Profile:*

Ap—0 to 8 inches; fine sandy loam  
Bt1—8 to 14 inches; fine sandy loam  
Bt2—14 to 23 inches; fine sandy loam  
Bt3—23 to 34 inches; fine sandy loam  
Bt4—34 to 42 inches; fine sandy loam  
Ab—42 to 47 inches; fine sandy loam  
2Btb1—47 to 56 inches; sandy clay loam  
2Btb2—56 to 69 inches; silty clay  
2Btb3—69 to 80 inches; clay loam

**Minor Components**

**Attica**

*Composition:* About 25 percent

*Slope:* 1 to 5 percent

*Drainage class:* Well drained

*Ecological site:* Sandy (pe21—28)

**Saltcreek**

*Composition:* About 15 percent

*Slope:* 1 to 5 percent

*Drainage class:* Well drained

*Ecological site:* Sandy (pe21—28)

*General Considerations:* Most areas are used for cropland, but some areas are in pasture or range. This mapunit is moderately well suited for most commonly grown crops. Wheat, grain sorghum, and irrigated corn are the predominant crops. The hazard for wind erosion is moderate and water erosion is slight. The high shrink—swell potential may limit some of the engineering uses of the soil.

**1986—Hayes—Solvay loamy fine sands, 0 to 5 percent slopes**

**Map Unit Composition**

Hayes: 55 percent

Solvay: 20 percent

Minor components: 25 percent

**Component Descriptions**

**Hayes**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Loamy eolian deposits over clayey alluvium

*Slope:* 0 to 5 percent

*Drainage class:* Well drained

*Slowest permeability:* Slow (About 0.06 in/hr)



*Available water capacity:* Moderate (About 7.8 inches)  
*Shrink—swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Sandy (pe21—28)  
*Land capability (irrigated):* 3e  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

Ap—0 to 8 inches; loamy fine sand  
 Bt1—8 to 14 inches; fine sandy loam  
 Bt2—14 to 23 inches; fine sandy loam  
 Bt3—23 to 34 inches; fine sandy loam  
 Bt4—34 to 42 inches; fine sandy loam  
 Ab—42 to 47 inches; fine sandy loam  
 2Btb1—47 to 56 inches; sandy clay loam  
 2Btb2—56 to 69 inches; silty clay  
 2Btb3—69 to 80 inches; clay loam

**Solvay**

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Interdune on paleoterrace on river valley  
*Parent material:* Loamy eolian deposits over alluvium  
*Slope:* 0 to 2 percent  
*Drainage class:* Somewhat poorly drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* Moderate (About 9.0 inches)  
*Shrink—swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 24 to 48 inches  
*Runoff class:* Very low  
*Ecological site:* Subirrigated (pe21—28)  
*Land capability (irrigated):*  
*Land capability (nonirrigated):* 2e

*Typical Profile:*

A—0 to 5 inches; loamy fine sand  
 2Bt1—5 to 14 inches; fine sandy loam  
 2Bt2—14 to 23 inches; fine sandy loam  
 2Bt3—23 to 37 inches; fine sandy loam  
 2BC1—37 to 58 inches; fine sandy loam  
 2BC2—58 to 76 inches; loamy fine sand  
 2BC3—76 to 80 inches; loamy fine sand

**Minor Components**

**Carway**

*Composition:* About 15 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Subirrigated (pe21—28)

**Farnum**

*Composition:* About 10 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe21—28)

*General Considerations:* Most areas are used for cropland, but some areas are in pasture or range. This mapunit is somewhat poorly suited for most commonly grown crops. Wheat and grain sorghum are the predominant crops grown. The hazard for wind erosion is severe and water erosion is slight. Wind erosion can be controlled by plant residue management, conservation tillage, and tall grass barriers. The high water tables, high shrink—swell potential, and sandy textures will limit most engineering uses of this mapunit.

**1987—Hayes—Turon complex, 0 to 5 percent slopes**

**Map Unit Composition**

Hayes: 40 percent  
 Turon: 35 percent  
 Minor components: 25 percent

**Component Descriptions**

**Hayes**

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Loamy eolian deposits over clayey alluvium  
*Slope:* 0 to 5 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* Moderate (About 7.8 inches)  
*Shrink—swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Sandy (pe21—28)  
*Land capability (irrigated):* 3e  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

Ap—0 to 8 inches; loamy fine sand  
 Bt1—8 to 14 inches; fine sandy loam  
 Bt2—14 to 23 inches; fine sandy loam  
 Bt3—23 to 34 inches; fine sandy loam  
 Bt4—34 to 42 inches; fine sandy loam  
 Ab—42 to 47 inches; fine sandy loam



2Btb1—47 to 56 inches; sandy clay loam  
 2Btb2—56 to 69 inches; silty clay  
 2Btb3—69 to 80 inches; clay loam

### **Turon**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Sandy eolian deposits over alluvium

*Slope:* 0 to 5 percent

*Drainage class:* Well drained

*Slowest permeability:* Very slow (About 0.00 in/hr)

*Available water capacity:* Moderate (About 7.1 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Sands (pe21—28)

*Land capability (irrigated):* 3e

*Land capability (nonirrigated):* 3e

#### *Typical Profile:*

Ap—0 to 8 inches; fine sand  
 Bt—8 to 28 inches; loamy fine sand  
 E&Bt—28 to 40 inches; stratified loamy fine sand to fine sandy loam  
 2Btb1—40 to 58 inches; silty clay  
 2Btb2—58 to 75 inches; silty clay  
 2Btb3—75 to 80 inches; silty clay

### **Minor Components**

#### **Naron**

*Composition:* About 15 percent

*Slope:* 0 to 2 percent

*Drainage class:* Well drained

*Ecological site:* Sandy (pe21—28)

#### **Solvay**

*Composition:* About 10 percent

*Slope:* 0 to 2 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Subirrigated (pe21—28)

#### **Carway**

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are used for cropland, but some areas are in pasture or range. This mapunit is somewhat poorly suited for most commonly grown crops. Wheat and grain sorghum are the predominant crops grown. The hazard for wind erosion is severe and water erosion is slight. Wind erosion can be controlled by plant residue management, conservation

tillage, and tall grass barriers. The high shrink—swell potential, and sandy textures will limit most engineering uses of this mapunit.

## **2204—Jamash—Piedmont clay loams, 0 to 1 percent slopes**

### **Map Unit Composition**

Jamash: 50 percent

Piedmont: 50 percent

### **Component Descriptions**

#### **Jamash**

*MLRA:* 80A — Central Rolling Red Prairies

*Landform:* Pediment on upland

*Parent material:* Residuum weathered from shale, unspecified

*Slope:* 0 to 1 percent

*Depth to restrictive feature:* 12 to 15 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Slowest permeability:* Very slow (About 0.00 in/hr)

*Available water capacity:* Very low (About 2.5 inches)

*Shrink—swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Shallow Prairie (pe24—32)

*Land capability (irrigated):*

*Land capability (nonirrigated):* 4e

#### *Typical Profile:*

Ap—0 to 4 inches; clay loam  
 Bw—4 to 11 inches; silty clay loam  
 BC—11 to 15 inches; silty clay loam  
 Cr1—15 to 28 inches; weathered bedrock  
 Cr2—28 to 80 inches; weathered bedrock

#### **Piedmont**

*MLRA:* 80A — Central Rolling Red Prairies

*Landform:* Pediment on upland

*Parent material:* Residuum weathered from shale, clayey

*Slope:* 0 to 1 percent

*Depth to restrictive feature:* 32 to 36 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Slowest permeability:* Very slow (About 0.00 in/hr)

*Available water capacity:* Low (About 5.4 inches)

*Shrink—swell potential:* High (About 7.5 LEP)



*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Clay Upland (pe24—32)  
*Land capability (irrigated):*  
*Land capability (nonirrigated):* 2e

*Typical Profile:*

Ap1—0 to 4 inches; clay loam  
 Ap2—4 to 7 inches; clay loam  
 Bt1—7 to 13 inches; clay  
 Bt2—13 to 20 inches; clay  
 Btk—20 to 24 inches; silty clay  
 BCk—24 to 32 inches; silty clay  
 Cr—32 to 80 inches; weathered bedrock

**Minor Components**  
**Unnamed Wet Soils**

*General Considerations:* Most areas are used as cropland, but some areas are used for pasture or range. This map unit is poorly suited for the commonly grown crops such as wheat and grain sorghum. The hazard of wind erosion is severe and water erosion is slight. Wind erosion can be controlled through conservation tillage practices. The shallow depth to bedrock and slow permeability can limit some engineering uses of this soil.

**2205—Jamash—Piedmont clay loams, 1 to 3 percent slopes**

**Map Unit Composition**

Jamash: 60 percent  
 Piedmont: 40 percent

**Component Descriptions**

**Jamash**

*MLRA:* 80A — Central Rolling Red Prairies  
*Landform:* Pediment on upland  
*Parent material:* Residuum weathered from shale, unspecified  
*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* 12 to 15 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Very low (About 2.5 inches)  
*Shrink—swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Shallow Prairie (pe24—32)  
*Land capability (irrigated):*  
*Land capability (nonirrigated):* 4e

*Typical Profile:*

Ap—0 to 4 inches; clay loam  
 Bw—4 to 11 inches; silty clay loam  
 BC—11 to 15 inches; silty clay loam  
 Cr1—15 to 28 inches; weathered bedrock  
 Cr2—28 to 80 inches; weathered bedrock

**Piedmont**

*MLRA:* 80A — Central Rolling Red Prairies  
*Landform:* Pediment on upland  
*Parent material:* Residuum weathered from shale, clayey  
*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* 32 to 36 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Low (About 5.4 inches)  
*Shrink—swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Clay Upland (pe24—32)  
*Land capability (irrigated):*  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

Ap1—0 to 4 inches; clay loam  
 Ap2—4 to 7 inches; clay loam  
 Bt1—7 to 13 inches; clay  
 Bt2—13 to 20 inches; clay  
 Btk—20 to 24 inches; silty clay  
 BCk—24 to 32 inches; silty clay  
 Cr—32 to 80 inches; weathered bedrock

**Minor Components**  
**Unnamed Wet Soils**

*General Considerations:* Some areas are used as cropland, but most areas are used for pasture or range. Many areas of this map unit are also in the Conservation Reserve Program. This map unit is poorly suited for the commonly grown crops such as wheat and grain sorghum. The hazard of wind erosion is severe and water erosion is slight. Wind erosion can be controlled through conservation tillage practices. The shallow depth to bedrock and slow permeability can limit some engineering uses of this soil.



## 2206—Jamash—Piedmont clay loams, 3 to 12 percent slopes

### Map Unit Composition

Jamash: 60 percent  
Piedmont: 40 percent

### Component Descriptions

#### Jamash

*MLRA:* 80A — Central Rolling Red Prairies  
*Landform:* Pediment on upland  
*Parent material:* Residuum weathered from shale, unspecified  
*Slope:* 3 to 12 percent  
*Depth to restrictive feature:* 12 to 15 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Very low (About 2.5 inches)  
*Shrink—swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Shallow Prairie (pe24—32)  
*Land capability (irrigated):*  
*Land capability (nonirrigated):* 6e

#### Typical Profile:

Ap—0 to 4 inches; clay loam  
Bw—4 to 11 inches; silty clay loam  
BC—11 to 15 inches; silty clay loam  
Cr1—15 to 28 inches; weathered bedrock  
Cr2—28 to 80 inches; weathered bedrock

#### Piedmont

*MLRA:* 80A — Central Rolling Red Prairies  
*Landform:* Pediment on upland  
*Parent material:* Residuum weathered from shale, clayey  
*Slope:* 3 to 12 percent  
*Depth to restrictive feature:* 32 to 36 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Low (About 5.4 inches)  
*Shrink—swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* High  
*Ecological site:* Clay Upland (pe24—32)  
*Land capability (irrigated):*  
*Land capability (nonirrigated):* 4e

#### Typical Profile:

Ap1—0 to 4 inches; clay loam  
Ap2—4 to 7 inches; clay loam  
Bt1—7 to 13 inches; clay  
Bt2—13 to 20 inches; clay  
Btk—20 to 24 inches; silty clay  
BCk—24 to 32 inches; silty clay  
Cr—32 to 80 inches; weathered bedrock

### Minor Components Unnamed Wet Soils

*General Considerations:* Most areas are used as pasture or range, but some areas are used for cropland. This map unit is poorly suited for the commonly grown crops such as wheat and grain sorghum. The hazard of wind and water erosion is severe. The shallow depth to bedrock, slow permeability, and steep slopes severely limit most engineering uses of this soil.

## 2207—Jamash clay loam, 0 to 8 percent slopes

### Map Unit Composition

Jamash: 80 percent  
Minor components: 20 percent

### Component Descriptions

#### Jamash

*MLRA:* 80A — Central Rolling Red Prairies  
*Landform:* Pediment on upland  
*Parent material:* Residuum weathered from shale, unspecified  
*Slope:* 0 to 8 percent  
*Depth to restrictive feature:* 12 to 15 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Very low (About 2.5 inches)  
*Shrink—swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Shallow Prairie (pe24—32)



*Land capability (nonirrigated): 6e*

*Typical Profile:*

Ap—0 to 4 inches; clay loam  
Bw—4 to 11 inches; silty clay loam  
BC—11 to 15 inches; silty clay loam  
Cr1—15 to 28 inches; weathered bedrock  
Cr2—28 to 80 inches; weathered bedrock

**Minor Components**

**Piedmont**

*Composition:* About 20 percent  
*Slope:* 0 to 8 percent  
*Depth to restrictive feature:* 32 to 36 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Clay Upland (pe24—32)

**Unnamed Wet Soils**

*General Considerations:* Most areas are used for pasture or range. This map unit is poorly suited for the commonly grown crops such as wheat and grain sorghum. The hazard of wind erosion is severe and water erosion is moderately severe. The shallow depth to bedrock and slow permeability can limit most engineering uses of this soil.

**2381—Kanza—Ninnescah sandy loams, 0 to 2 percent slopes, Commonly flooded**

**Map Unit Composition**

Kanza: 50 percent  
Ninnescah: 50 percent

**Component Descriptions**

**Kanza**

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Flood plain on river valley  
*Parent material:* Alluvium  
*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Low (About 5.7 inches)  
*Shrink—swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* Frequent  
*Depth to seasonal water saturation:* About 0 to 36 inches  
*Runoff class:* Very low  
*Ecological site:* Subirrigated (pe21—28)  
*Land capability (nonirrigated):* 5w

*Typical Profile:*

A1—0 to 4 inches; sandy loam  
A2—4 to 9 inches; loamy fine sand  
AC—9 to 17 inches; loamy fine sand  
C1—17 to 33 inches; loamy fine sand  
C2—33 to 80 inches; sand

**Ninnescah**

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Flood plain on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained  
*Slowest permeability:* Moderately rapid (About 1.98 in/hr)  
*Available water capacity:* Moderate (About 7.4 inches)  
*Shrink—swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* Occasional  
*Depth to seasonal water saturation:* About 24 to 24 inches  
*Runoff class:* Very low  
*Ecological site:* Subirrigated (pe21—28)  
*Land capability (irrigated):*  
*Land capability (nonirrigated):* 5w

*Typical Profile:*

Ak1—0 to 6 inches; sandy loam  
Ak2—6 to 14 inches; sandy loam  
Ak3—14 to 19 inches; sandy loam  
Bkg1—19 to 30 inches; sandy loam  
Bkg2—30 to 37 inches; sandy loam  
Cg1—37 to 52 inches; sandy loam  
Cg2—52 to 80 inches; loamy sand

*General Considerations:* Most areas are in pasture or range. This map unit is poorly suited for the most commonly grown crops. The hazard for wind and water erosion is slight. The water tables, flooding, and depth to sand limit most engineering uses for this mapunit.

**2390—Kaskan loam, 0 to 1 percent slopes, rarely flooded**

**Map Unit Composition**

Kaskan: 85 percent  
Minor components: 15 percent

**Component Descriptions**

**Kaskan**

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Flood plain on river valley  
*Parent material:* Loamy alluvium



*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Moderate (About 8.7 inches)  
*Shrink—swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* Rare  
*Depth to seasonal water saturation:* About 60 to 60 inches  
*Runoff class:* Very low  
*Ecological site:* Loamy Lowland (pe21—28)  
*Land capability (nonirrigated):* 2w

*Typical Profile:*

Ap—0 to 7 inches; loam  
 A—7 to 17 inches; clay loam  
 Bw1—17 to 24 inches; loam  
 Bw2—24 to 35 inches; fine sandy loam  
 BC—35 to 41 inches; loamy fine sand  
 C1—41 to 47 inches; fine sand  
 C2—47 to 66 inches; sand  
 C3—66 to 80 inches; stratified gravelly coarse sand to sand

**Minor Components**

**Tobin**

*Composition:* About 15 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Lowland (pe25—34)

*General Considerations:* Most areas are in cropland, but some are in pasture or range. This map unit is moderately well suited for most commonly grown crops. Wheat and grain sorghum are the predominant crops. The hazard for wind and water erosion is slight. The water table and rare chance of flooding may limit some of the engineering practices.

**2391—Kaskan silty clay loam, 0 to 1 percent slopes, frequently flooded, channeled**

**Map Unit Composition**

Kaskan: 75 percent  
 Minor components: 25 percent

**Component Descriptions**

**Kaskan**

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Flood plain on river valley

*Parent material:* Loamy alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* Moderate (About 7.8 inches)  
*Shrink—swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* Frequent  
*Depth to seasonal water saturation:* About 60 to 60 inches  
*Runoff class:* Very low  
*Ecological site:* Loamy Lowland (pe21—28)  
*Land capability (nonirrigated):* 5w

*Typical Profile:*

A1—0 to 9 inches; silty clay loam  
 A2—9 to 13 inches; silty clay loam  
 Bw1—13 to 17 inches; fine sandy loam  
 Bw2—17 to 21 inches; fine sandy loam  
 Bw3—21 to 27 inches; fine sandy loam  
 C1—27 to 43 inches; stratified fine sand to loamy fine sand  
 C2—43 to 57 inches; stratified fine sand to fine sandy loam  
 C3—57 to 80 inches; stratified fine sand to fine sandy loam

**Minor Components**

**Tobin**

*Composition:* About 25 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Lowland (pe25—34)

**Unnamed Wet Soils**

*Composition:* About

*General Considerations:* Most areas are in pasture or range. This map unit is poorly suited for most commonly grown crops. The hazard for wind and water erosion is slight. The water table and occasional chance of flooding may limit some of the engineering practices.

**2395—Kisiwa loam, 0 to 1 percent slopes**

**Map Unit Composition**

Kisiwa: 90 percent  
 Minor components: 10 percent



## Component Descriptions

### Kisiwa

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Flood plain on river valley, terrace on river valley

*Parent material:* Loamy alluvium over clayey alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Slowest permeability:* Very slow (About 0.00 in/hr)

*Available water capacity:* Moderate (About 8.7 inches)

*Shrink—swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Ponding hazard:* Occasional

*Depth to seasonal water saturation:* About 0 to 0 inches

*Runoff class:* Very low

*Ecological site:* Saline Subirrigated (pe21—28)

*Land capability (nonirrigated):* 4s

#### Typical Profile:

Ap1—0 to 4 inches; loam

Ap2—4 to 7 inches; loam

Btkn—7 to 14 inches; clay loam

Btknssg1—14 to 23 inches; clay loam

Btknssg2—23 to 31 inches; clay

Btknssg3—31 to 40 inches; clay

Btknssg4—40 to 46 inches; loam

Btkg—46 to 52 inches; fine sandy loam

BCg—52 to 58 inches; fine sandy loam

Cg—58 to 65 inches; stratified coarse sand to fine sandy loam

2C—65 to 80 inches; stratified coarse sand

### Minor Components

#### Punkin

*Composition:* About 10 percent

*Slope:* 0 to 1 percent

*Drainage class:* Moderately well drained

*Ecological site:* Clay Pan (pe21—28)

#### Carbika

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* This map unit is poorly suited to the commonly grown crops due to the sodic conditions and wetness. Most areas are used for pasture or range. For areas that are cropped, the hazard of wind or water erosion is slight. Maintaining soil tilth and soil crusting are problems, but they can be improved by adding organic matter. The high sodium content, pH, soluble salts, high shrink—swell, and water table limit the engineering uses of these soils.

## 2509—Ladysmith silty clay loam, 0 to 1 percent slopes

### Map Unit Composition

Ladysmith: 100 percent

## Component Descriptions

### Ladysmith

*MLRA:* 75 — Central Loess Plains

*Landform:* Paleoterrace on upland

*Parent material:* Clayey alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Slowest permeability:* Very slow (About 0.00 in/hr)

*Available water capacity:* Moderate (About 8.9 inches)

*Shrink—swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* About 30 to 30 inches

*Runoff class:* Very low

*Ecological site:* Clay Upland (pe25—34)

*Land capability (nonirrigated):* 2s

#### Typical Profile:

Ap—0 to 8 inches; silty clay loam

Bt1—8 to 21 inches; silty clay

Bt2—21 to 31 inches; silty clay

BC—31 to 45 inches; silty clay

C—45 to 80 inches; silty clay loam

### Minor Components

#### Unnamed Wet Soils

*General Considerations:* Most areas are used as cropland. This mapunit is well suited to all commonly grown crops. Wheat, grain sorghum, and soybeans are the major crops. A few areas are planted to irrigated corn. The hazard of water erosion is slight and wind erosion is moderate. This problem can be overcome by using a conservation tillage and residue management. This mapunit is somewhat poorly suited for most engineering uses, due to the high water table, and high shrink—swell potential.



## 2556—Langdon fine sand, 0 to 15 percent slopes

### Map Unit Composition

Langdon: 50 percent  
Minor components: 50 percent

### Component Descriptions

#### Langdon

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Sandy eolian deposits

*Slope:* 0 to 15 percent

*Drainage class:* Somewhat excessively drained

*Slowest permeability:* Rapid (About 6.00 in/hr)

*Available water capacity:* Low (About 3.2 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Ponding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Medium

*Ecological site:* Choppy Sands (pe21—28)

*Land capability (nonirrigated):* 6e

#### Typical Profile:

A—0 to 8 inches; fine sand

E&Bt—8 to 47 inches; stratified sand to loamy sand

C—47 to 64 inches; fine sand

E&Btb—64 to 80 inches; stratified sand to loamy sand

### Minor Components

#### Turon

*Composition:* About 25 percent

*Slope:* 0 to 10 percent

*Drainage class:* Well drained

*Ecological site:* Sands (pe21—28)

#### Tivin

*Composition:* About 25 percent

*Slope:* 1 to 15 percent

*Drainage class:* Somewhat excessively drained

*Ecological site:* Choppy Sands (pe21—28)

#### Carway

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Subirrigated (pe21—28)

#### Warnut

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are in pasture or range. This mapunit is poorly suited for the most commonly grown crops. The hazard for wind erosion is severe and water erosion is moderate. The sandy textures limit most engineering practices.

## 2587—Imano clay loam, 0 to 1 percent slopes, occasionally flooded

### Map Unit Composition

Imano: 85 percent  
Minor components: 15 percent

### Component Descriptions

#### Imano

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Flood plain on river valley

*Parent material:* Loamy alluvium over sandy alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Slowest permeability:* Moderately slow (About 0.20 in/hr)

*Available water capacity:* Moderate (About 6.6 inches)

*Shrink—swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* Occasional

*Ponding hazard:* None

*Depth to seasonal water saturation:* About 24 to 48 inches

*Runoff class:* Very low

*Ecological site:* Subirrigated (pe21—28)

*Land capability (nonirrigated):* 3w

#### Typical Profile:

Ap—0 to 10 inches; clay loam

Bw—10 to 25 inches; loam

2C1—25 to 55 inches; stratified fine sand to sand

2C2—55 to 80 inches; coarse sand

### Minor Components

#### Willowbrook

*Composition:* About 15 percent

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Subirrigated (pe21—28)

#### Kanza

*Slope:* 0 to 2 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21—28)



**Ninnescah**

*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are used for pasture or range, some areas are used for hay production. This map unit is poorly suited for most commonly grown crops. Wheat and alfalfa are the predominant crops. The hazard for water erosion is slight and wind erosion is severe. Wind erosion can be controlled by conservation tillage and residue management. Depth to sand and water tables can limit most engineering uses for this map unit.

### **2588—Longford silty clay loam, 3 to 7 percent slopes, moderately eroded**

#### **Map Unit Composition**

Longford: 90 percent  
 Minor components: 10 percent

#### **Component Descriptions**

**Longford**

*MLRA:* 75 — Central Loess Plains  
*Landform:* Hillslope on upland  
*Parent material:* Silty alluvium or loess  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* High (About 10.3 inches)  
*Shrink—swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Loamy Upland (pe25—34)  
*Land capability (nonirrigated):* 4e

*Typical Profile:*

Ap—0 to 6 inches; silty clay loam  
 Bt1—6 to 11 inches; silty clay loam  
 Bt2—11 to 28 inches; silty clay  
 Bt3—28 to 43 inches; silty clay  
 BC1—43 to 60 inches; silty clay loam  
 BC2—60 to 80 inches; silty clay loam

**Minor Components****Geary**

*Phase:* Moderately Eroded  
*Composition:* About 10 percent  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe25—34)

*General Considerations:* Most areas are used as cropland, but some are used for pasture or range. This mapunit is moderately well suited to all commonly grown crops. Wheat, grain sorghum, and soybeans are the major crops. The hazard of water erosion is severe and wind erosion is moderate. Ephemeral gully erosion potential is also severe. This problem can be overcome by using a conservation tillage, tall grass barriers, contour farming, terraces and waterways, and residue management. This mapunit is moderately well suited for most engineering uses, but has some limits due to high clay content and potential for shrink—swell.

### **2812—Mahone loamy fine sand, 0 to 2 percent slopes, rarely flooded**

#### **Map Unit Composition**

Mahone: 95 percent  
 Minor components: 5 percent

#### **Component Descriptions**

**Mahone**

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Flood plain on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Moderate (About 8.9 inches)  
*Shrink—swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* Rare  
*Depth to seasonal water saturation:* About 60 to 60 inches  
*Runoff class:* Very low  
*Ecological site:* Loamy Lowland (pe21—28)  
*Land capability (nonirrigated):* 2w

*Typical Profile:*

Ap—0 to 8 inches; loamy fine sand  
 A—8 to 14 inches; fine sandy loam  
 Bw1—14 to 20 inches; fine sandy loam  
 Bw2—20 to 25 inches; very fine sandy loam



Bw3—25 to 33 inches; silt loam  
 2C—33 to 39 inches; stratified silt loam to fine sandy loam  
 2Ab1—39 to 42 inches; clay loam  
 2Ab2—42 to 48 inches; fine sandy loam  
 2Bwb1—48 to 54 inches; very fine sandy loam  
 2Bwb2—54 to 61 inches; fine sandy loam  
 2Ab—61 to 66 inches; fine sandy loam  
 2Bwb—66 to 71 inches; fine sandy loam  
 3BC—71 to 78 inches; loamy fine sand  
 3C—78 to 80 inches; coarse sand

### Minor Components

#### Yaggy

*Composition:* About 5 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Sandy Lowland (pe21—28)

*General Considerations:* Most areas are in cropland, but some are in pasture or range. Some areas are also in the Conservation Reserve Program. This map unit is somewhat poorly suited for most commonly grown crops. Wheat and grain sorghum are major crops. The hazard for wind erosion is severe and water erosion is slight. The high water tables and depth to sand will many engineering practices.

## 2948—Nalim loam, 0 to 1 percent slopes

### Map Unit Composition

Nalim: 80 percent  
 Minor components: 20 percent

### Component Descriptions

#### Nalim

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* High (About 10.4 inches)  
*Shrink—swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Loamy Upland (pe24—32)

*Land capability (irrigated):* 2e  
*Land capability (nonirrigated):* 2e

#### Typical Profile:

Ap—0 to 6 inches; loam  
 Bt1—6 to 9 inches; loam  
 Bt2—9 to 13 inches; clay loam  
 Bt3—13 to 21 inches; clay loam  
 Bt4—21 to 31 inches; clay loam  
 Bt5—31 to 39 inches; sandy clay loam  
 Bt6—39 to 44 inches; gravelly sandy clay loam  
 Bt7—44 to 52 inches; sandy clay loam  
 BC—52 to 62 inches; loamy coarse sand  
 C1—62 to 72 inches; gravelly loamy coarse sand  
 C2—72 to 80 inches; stratified sand to gravelly loamy coarse sand

### Minor Components

#### Farnum

*Composition:* About 20 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe21—28)

### Unnamed Wet Soils

*Composition:* About

*General Considerations:* Most areas are used as cropland. This mapunit is well suited to all commonly grown crops. Wheat, grain sorghum, and soybeans are the major crops. A few areas are planted to irrigated corn. The hazard of water erosion is slight and wind erosion is moderate. This problem can be overcome by using conservation tillage and residue management. This mapunit is moderately well suited for most engineering uses.

## 2949—Naron fine sandy loam, 3 to 7 percent slopes, moderately eroded

### Map Unit Composition

Naron: 85 percent  
 Minor components: 15 percent

### Component Descriptions

#### Naron

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Loamy eolian deposits  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained



*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 9.8 inches)  
*Shrink—swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Sandy (pe21—28)  
*Land capability (irrigated):* 3e  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

Ap—0 to 8 inches; fine sandy loam  
 Bt1—8 to 28 inches; sandy clay loam  
 Bt2—28 to 39 inches; sandy clay loam  
 Bt3—39 to 55 inches; sandy clay loam  
 BC—55 to 66 inches; fine sandy loam  
 C—66 to 80 inches; loamy fine sand

**Minor Components**

**Saltcreek**

*Composition:* About 15 percent  
*Slope:* 3 to 6 percent  
*Drainage class:* Well drained  
*Ecological site:* Sandy (pe21—28)

*General Considerations:* Most areas are in cropland, but some are in pasture or range. This mapunit is moderately well suited for most commonly grown crops. Wheat and grain sorghum are the predominant crops grown. The hazard for wind and water erosion is moderate. Erosion can be controlled by terraces, plant residue management, conservation tillage, and tall grass barriers. The slope of this mapunit may limit some of the engineering practices for this mapunit.

**2950—Naron fine sandy loam, 7 to 15 percent slopes, moderately eroded**

**Map Unit Composition**

Naron: 85 percent  
 Minor components: 15 percent

**Component Descriptions**

**Naron**

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Loamy eolian deposits

*Slope:* 7 to 15 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 9.8 inches)  
*Shrink—swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Sandy (pe21—28)  
*Land capability (irrigated):* 3e  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

Ap—0 to 8 inches; fine sandy loam  
 Bt1—8 to 28 inches; sandy clay loam  
 Bt2—28 to 39 inches; sandy clay loam  
 Bt3—39 to 55 inches; sandy clay loam  
 BC—55 to 66 inches; fine sandy loam  
 C—66 to 80 inches; loamy fine sand

**Minor Components**

**Avans**

*Composition:* About 15 percent  
*Slope:* 6 to 9 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe21—28)

*General Considerations:* Most areas are in range or pasture with some areas in cropland. This mapunit is somewhat poorly suited for most commonly grown crops. Wheat and grain sorghum are the commonly grown crops. The hazard for wind erosion and water erosion is severe. Erosion can be controlled by building terraces, managing plant residue, conservation tillage, and planting tall grass barriers. The slope of this mapunit may limit some of the engineering practices for this mapunit.

**2951—Nash silt loam, 1 to 3 percent slopes**

**Map Unit Composition**

Nash: 90 percent  
 Minor components: 10 percent

**Component Descriptions**

**Nash**

*MLRA:* 80A  
*Landform:* Interfluvium on upland



*Parent material:* Residuum weathered from sandstone and siltstone

*Slope:* 1 to 3 percent

*Depth to restrictive feature:* 25 to 32 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* Low (About 5.3 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Loamy Upland (pe24—32)

*Land capability (irrigated):*

*Land capability (nonirrigated):* 3e

*Typical Profile:*

Ap—0 to 8 inches; silt loam

Bw—8 to 19 inches; silt loam

BC—19 to 28 inches; silt loam

Cr—28 to 80 inches; weathered bedrock

### Minor Components

#### Lucien

*Composition:* About 10 percent

*Slope:* 1 to 3 percent

*Depth to restrictive feature:* 12 to 16 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Ecological site:* Shallow Prairie (pe24—32)

### Unnamed Wet Soils

*General Considerations:* Most areas are used for cropland, but some areas are in pasture or range. This map unit is somewhat poorly suited to commonly grown crops such as wheat and grain sorghum. The hazard for wind and water erosion is severe.

Ephemeral gully erosion potential is severe for these soils. Wind and water erosion can be controlled by maintaining plant residue through the use of conservation tillage systems, strip cropping, field windbreaks, contour farming, tall grass barriers, terraces, and grassed waterways. The shallow depth to bedrock material can limit some of the engineering uses of these soils.

## 2952—Nash—Lucien silt loams, 3 to 7 percent slopes

### Map Unit Composition

Nash: 60 percent

Lucien: 30 percent

Minor components: 10 percent

### Component Descriptions

#### Nash

*MLRA:* 80A

*Landform:* Hillslope on upland

*Parent material:* Residuum weathered from sandstone and siltstone

*Slope:* 3 to 7 percent

*Depth to restrictive feature:* 25 to 32 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* Low (About 5.3 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Medium

*Ecological site:* Loamy Upland (pe24—32)

*Land capability (irrigated):*

*Land capability (nonirrigated):* 4e

*Typical Profile:*

Ap—0 to 8 inches; silt loam

Bw—8 to 19 inches; silt loam

BC—19 to 28 inches; silt loam

Cr—28 to 80 inches; weathered bedrock

#### Lucien

*MLRA:* 80A

*Landform:* Hillslope on upland

*Parent material:* Residuum weathered from sandstone—siltstone

*Slope:* 3 to 7 percent

*Depth to restrictive feature:* 12 to 16 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* Very low (About 2.2 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Medium

*Ecological site:* Shallow Prairie (pe24—32)



*Land capability (nonirrigated):* 6e

*Typical Profile:*

Ap—0 to 6 inches; silt loam  
Bw—6 to 12 inches; loam  
Cr—12 to 80 inches; weathered bedrock

**Minor Components**

**Ost**

*Composition:* About 10 percent  
*Slope:* 3 to 8 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe24—32)

**Unnamed Wet Soils**

*General Considerations:* Most areas are used for pasture or range, but some areas are in the Conservation Reserve Program and cropland. This map unit is poorly suited to commonly grown crops such as wheat and grain sorghum. The hazard for wind and water erosion is severe. Ephemeral gully erosion potential is severe for these soils. Wind and water erosion can be controlled by maintaining plant residue through the use of conservation tillage systems, strip cropping, field windbreaks, contour farming, tall grass barriers, terraces, and grassed waterways. The shallow depth to bedrock material and steeper slopes can limit some of the engineering uses of these soils.

**2953—Nash—Lucien silt loams, 7 to 15 percent slopes, moderately eroded**

**Map Unit Composition**

Nash: 70 percent  
Lucien: 20 percent  
Minor components: 10 percent

**Component Descriptions**

**Nash**

*MLRA:* 80A  
*Landform:* Hillslope on upland  
*Parent material:* Residuum weathered from sandstone and siltstone  
*Slope:* 7 to 15 percent  
*Depth to restrictive feature:* 25 to 32 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* Low (About 5.3 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very high

*Ecological site:* Loamy Upland (pe24—32)

*Land capability (irrigated):*

*Land capability (nonirrigated):* 4e

*Typical Profile:*

Ap—0 to 8 inches; silt loam  
Bw—8 to 19 inches; silt loam  
BC—19 to 28 inches; silt loam  
Cr—28 to 80 inches; weathered bedrock

**Lucien**

*MLRA:* 80A

*Landform:* Hillslope on upland

*Parent material:* Residuum weathered from sandstone—siltstone

*Slope:* 8 to 15 percent

*Depth to restrictive feature:* 12 to 16 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* Very low (About 2.2 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very high

*Ecological site:* Shallow Prairie (pe24—32)

*Land capability (irrigated):*

*Land capability (nonirrigated):* 6e

*Typical Profile:*

Ap—0 to 6 inches; silt loam  
Bw—6 to 12 inches; loam  
Cr—12 to 80 inches; weathered bedrock

**Minor Components**

**Clark**

*Composition:* About 10 percent  
*Slope:* 8 to 15 percent  
*Drainage class:* Well drained  
*Ecological site:* Limy Upland (pe21—28)

**Unnamed Wet Soils**

*General Considerations:* Most areas are used for pasture or range. The shallow depth to bedrock material and steeper slopes limit most engineering uses of these soils.



## 2955—Nickerson fine sandy loam, 0 to 1 percent slopes

### Map Unit Composition

Nickerson: 100 percent

### Component Descriptions

#### Nickerson

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Terrace on river valley

*Parent material:* Alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Moderately well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* Moderate (About 7.4 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* About 24 to 48 inches

*Runoff class:* Very low

*Ecological site:* Sandy (pe21—28)

*Land capability (irrigated):* 3e

*Land capability (nonirrigated):* 3e

#### Typical Profile:

Ap—0 to 6 inches; fine sandy loam  
A—6 to 12 inches; loamy fine sand  
BA—12 to 18 inches; fine sandy loam  
Bt—18 to 29 inches; sandy clay loam  
Btk1—29 to 34 inches; loam  
Btk2—34 to 38 inches; very fine sandy loam  
BC—38 to 45 inches; loamy fine sand  
C1—45 to 53 inches; fine sand  
C2—53 to 57 inches; fine sand  
C3—57 to 80 inches; sand

#### Minor Components

##### Carway

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are in cropland, some are in pasture or range. This mapunit is moderately well suited for the most commonly grown crops. Wheat, grain sorghum and irrigated corn are the major crops. The hazard for wind erosion is severe and water erosion is slight. Wind erosion can be controlled by conservation tillage, plant residue management, and tall grass barriers. This mapunit is somewhat poorly suited for most engineering practices due to depth of sand and water tables.

## 2956—Nickerson loamy fine sand, 0 to 2 percent slopes

### Map Unit Composition

Nickerson: 85 percent

Minor components: 15 percent

### Component Descriptions

#### Nickerson

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Terrace on river valley

*Parent material:* Alluvium

*Slope:* 0 to 2 percent

*Drainage class:* Moderately well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* Moderate (About 7.2 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* About 24 to 48 inches

*Runoff class:* Very low

*Ecological site:* Sandy (pe21—28)

*Land capability (irrigated):* 3e

*Land capability (nonirrigated):* 3e

#### Typical Profile:

Ap—0 to 6 inches; loamy fine sand  
A—6 to 12 inches; loamy fine sand  
BA—12 to 18 inches; fine sandy loam  
Bt—18 to 29 inches; sandy clay loam  
Btk1—29 to 34 inches; loam  
Btk2—34 to 38 inches; very fine sandy loam  
BC—38 to 45 inches; loamy fine sand  
C1—45 to 53 inches; fine sand  
C2—53 to 57 inches; fine sand  
C3—57 to 80 inches; sand

#### Minor Components

##### Carway

*Composition:* About 15 percent

*Slope:* 0 to 2 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Subirrigated (pe21—28)

##### Carbika

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are in cropland, some are in pasture or range. This mapunit is moderately well suited for the most commonly grown crops. Wheat, grain sorghum and irrigated corn are the major crops. The hazard for wind erosion is severe



and water erosion is slight. Wind erosion can be controlled by conservation tillage, plant residue management, and tall grass barriers. This mapunit is somewhat poorly suited for most engineering practices due to depth of sand and water tables.

## 2957—Nickerson—Punkin fine sandy loams, 0 to 2 percent slopes

### Map Unit Composition

Nickerson: 50 percent  
Punkin: 50 percent

### Component Descriptions

#### Nickerson

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Terrace on river valley

*Parent material:* Alluvium

*Slope:* 0 to 2 percent

*Drainage class:* Moderately well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* Moderate (About 7.4 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* About 24 to 48 inches

*Runoff class:* Very low

*Ecological site:* Sandy (pe21—28)

*Land capability (irrigated):* 3e

*Land capability (nonirrigated):* 3e

#### Typical Profile:

Ap—0 to 6 inches; fine sandy loam  
A—6 to 12 inches; loamy fine sand  
BA—12 to 18 inches; fine sandy loam  
Bt—18 to 29 inches; sandy clay loam  
Btk1—29 to 34 inches; loam  
Btk2—34 to 38 inches; very fine sandy loam  
BC—38 to 45 inches; loamy fine sand  
C1—45 to 53 inches; fine sand  
C2—53 to 57 inches; fine sand  
C3—57 to 80 inches; sand

#### Punkin

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Clayey alluvium over sandy alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Moderately well drained

*Slowest permeability:* Very slow (About 0.00 in/hr)

*Available water capacity:* Moderate (About 8.0 inches)

*Shrink—swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Saline Subirrigated (pe21—28)

*Land capability (irrigated):* 3s

*Land capability (nonirrigated):* 3s

#### Typical Profile:

Ap—0 to 6 inches; fine sandy loam  
An—6 to 14 inches; fine sandy loam  
2Btknz1—14 to 22 inches; clay loam  
2Btknz2—22 to 32 inches; clay  
2Btkn1—32 to 41 inches; sandy clay loam  
2Btkn2—41 to 51 inches; sandy clay loam  
3BC—51 to 63 inches; sand  
3C—63 to 80 inches; stratified coarse sand to sand

### Minor Components

#### Carway

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Subirrigated (pe21—28)

#### Carbika

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are in cropland, some are in pasture or range. This mapunit is moderately well suited for the most commonly grown crops. Wheat, grain sorghum and irrigated corn are the major crops. The hazard for wind erosion is severe and water erosion is slight. Wind erosion can be controlled by conservation tillage, plant residue management, and tall grass barriers. This mapunit is somewhat poorly suited for most engineering practices due to depth of sand, water tables, potential for shrink—swell, and soluble salt content.

## 2958—Ninnescah fine sandy loam, 0 to 1 percent slopes, occasionally flooded

### Map Unit Composition

Ninnescah: 85 percent

Minor components: 15 percent



## Component Descriptions

### Ninnescah

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Flood plain on river valley

*Parent material:* Loamy alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Slowest permeability:* Moderately rapid (About 1.98 in/hr)

*Available water capacity:* Moderate (About 7.4 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* Occasional

*Depth to seasonal water saturation:* About 24 to 24 inches

*Runoff class:* Very low

*Ecological site:* Subirrigated (pe21—28)

*Land capability (nonirrigated):* 5w

#### Typical Profile:

Ak1—0 to 6 inches; fine sandy loam

Ak2—6 to 14 inches; sandy loam

Ak3—14 to 19 inches; sandy loam

Bkg1—19 to 30 inches; sandy loam

Bkg2—30 to 37 inches; sandy loam

Cg1—37 to 52 inches; sandy loam

Cg2—52 to 80 inches; loamy sand

### Minor Components

#### Kanza

*Composition:* About 15 percent

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are in pasture or range. This map unit is poorly suited for the most commonly grown crops. The hazard for wind and water erosion is slight. The water tables, flooding, and depth to sand limit most engineering uses for this mapunit.

## 2959—Ninnescah fine sandy loam, 0 to 1 percent slopes, occasionally flooded, saline

### Map Unit Composition

Ninnescah: 100 percent

## Component Descriptions

### Ninnescah

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Flood plain on river valley

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Slowest permeability:* Moderately rapid (About 1.98 in/hr)

*Available water capacity:* Moderate (About 6.4 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* Occasional

*Depth to seasonal water saturation:* About 0 to 24 inches

*Runoff class:* Very low

*Ecological site:* Saline Subirrigated (pe21—28)

*Land capability (nonirrigated):* 5s

#### Typical Profile:

Ak1—0 to 6 inches; fine sandy loam

Ak2—6 to 14 inches; sandy loam

Ak3—14 to 19 inches; sandy loam

Bkg1—19 to 30 inches; sandy loam

Bkg2—30 to 37 inches; sandy loam

Cg1—37 to 52 inches; loamy sand

Cg2—52 to 80 inches; loamy sand

*General Considerations:* This map unit is poorly suited to the commonly grown crops due to the sodic conditions and wetness. Most areas are used for pasture or range. For areas that are cropped, the hazard of wind or water erosion is slight. Maintaining soil tilth and soil crusting are problems, but they can be improved by adding organic matter. The high sodium content, pH, soluble salts, and water table limit the engineering uses of these soils.

## 3051—Ost loam, 0 to 1 percent slope

### Map Unit Composition

Ost: 90 percent

Minor components: 10 percent

## Component Descriptions

### Ost

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderately slow (About 0.20 in/hr)

*Available water capacity:* High (About 10.0 inches)



*Shrink—swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Loamy Upland (pe24—32)

*Land capability (nonirrigated):* 2c

*Typical Profile:*

Ap—0 to 8 inches; loam  
Bt1—8 to 12 inches; loam  
Bt2—12 to 18 inches; loam  
Bk1—18 to 23 inches; clay loam  
Bk2—23 to 38 inches; clay loam  
BCk—38 to 54 inches; loam  
C—54 to 80 inches; loam

### Minor Components

#### Clark

*Composition:* About 10 percent

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Ecological site:* Limy Upland (pe21—28)

### Unnamed Wet Soils

*General Considerations:* Most areas are used as cropland. This mapunit is well suited to all commonly grown crops. Wheat, grain sorghum, and soybeans are the predominant crops. The hazard of wind and water erosion is slight. This mapunit is well suited for most engineering practices.

## 3052—Ost—Clark loams, 1 to 3 percent slopes

### Map Unit Composition

Ost: 55 percent

Clark: 45 percent

### Component Descriptions

#### Ost

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderately slow (About 0.20 in/hr)

*Available water capacity:* High (About 10.0 inches)

*Shrink—swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Loamy Upland (pe24—32)

*Land capability (nonirrigated):* 2c

*Typical Profile:*

Ap—0 to 8 inches; loam  
Bt1—8 to 12 inches; loam  
Bt2—12 to 18 inches; loam  
Bk1—18 to 23 inches; clay loam  
Bk2—23 to 38 inches; clay loam  
BCk—38 to 54 inches; loam  
C—54 to 80 inches; loam

#### Clark

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 10.4 inches)

*Shrink—swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Limy Upland (pe21—28)

*Land capability (nonirrigated):* 2c

*Typical Profile:*

Ap—0 to 11 inches; loam  
Bw—11 to 16 inches; loam  
Bk1—16 to 28 inches; loam  
Bk2—28 to 45 inches; fine sandy loam  
BCk1—45 to 65 inches; fine sandy loam  
Ck2—65 to 80 inches; very fine sandy loam

### Minor Components

#### Unnamed Wet Soils

*General Considerations:* Most areas are used as cropland. This mapunit is well suited to all commonly grown crops. Wheat, grain sorghum, and soybeans are the predominant crops. The hazard of wind erosion is moderate and water erosion is slight. This mapunit is well suited for most engineering practices.



## 3170—Penalosa silt loam, 0 to 1 percent slopes

### Map Unit Composition

Penalosa: 100 percent

### Component Descriptions

#### Penalosa

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Moderately well drained

*Slowest permeability:* Slow (About 0.06 in/hr)

*Available water capacity:* High (About 10.9 inches)

*Shrink—swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Loamy Upland (pe21—28)

*Land capability (irrigated):* 1

*Land capability (nonirrigated):* 2c

#### Typical Profile:

Ap1—0 to 5 inches; silt loam

Ap2—5 to 10 inches; silt loam

Bt1—10 to 14 inches; silty clay loam

Bt2—14 to 22 inches; silty clay loam

Btss1—22 to 28 inches; silty clay loam

Btss2—28 to 34 inches; silty clay loam

Btss3—34 to 39 inches; silty clay loam

BC—39 to 48 inches; silt loam

2Btkssb1—48 to 61 inches; silty clay loam

2Btkssb2—61 to 71 inches; silty clay loam

2Btkssb3—71 to 80 inches; clay loam

### Minor Components

#### Carbika

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are used for cropland but some areas are in pasture. This mapunit is well suited for most commonly grown crops. Wheat, grain sorghum, soybeans and irrigated corn are the predominant crops in the area. The hazard of wind and water erosion is slight. The slow permeability and high shrink—swell can limit the engineering uses of the soil.

## 3171—Penalosa silt loam, 1 to 3 percent slopes

### Map Unit Composition

Penalosa: 100 percent

### Component Descriptions

#### Penalosa

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 1 to 3 percent

*Drainage class:* Moderately well drained

*Slowest permeability:* Slow (About 0.06 in/hr)

*Available water capacity:* High (About 10.9 inches)

*Shrink—swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Loamy Upland (pe21—28)

*Land capability (irrigated):* 1

*Land capability (nonirrigated):* 2c

#### Typical Profile:

Ap1—0 to 5 inches; silt loam

Ap2—5 to 10 inches; silty clay loam

Bt1—10 to 14 inches; silty clay loam

Bt2—14 to 22 inches; silty clay loam

Btss1—22 to 28 inches; silty clay loam

Btss2—28 to 34 inches; silty clay loam

Btss3—34 to 39 inches; silty clay loam

BC—39 to 48 inches; silt loam

2Btkssb1—48 to 61 inches; silty clay loam

2Btkssb2—61 to 71 inches; silty clay loam

2Btkssb3—71 to 80 inches; clay loam

### Minor Components

#### Unnamed Wet Soils

*General Considerations:* Most areas are used for cropland but some areas are in pasture. This mapunit is well suited for most commonly grown crops. Wheat, grain sorghum, soybeans and irrigated corn are the predominant crops in the area. The hazard of wind and water erosion is slight. The slow permeability and high shrink—swell can limit the engineering uses of the soil.



## 3180—Pratt fine sand, 5 to 10 percent slopes

### Map Unit Composition

Pratt: 85 percent  
Minor components: 15 percent

### Component Descriptions

#### Pratt

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Sandy eolian deposits  
*Slope:* 5 to 10 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Rapid (About 5.95 in/hr)  
*Available water capacity:* Moderate (About 6.3 inches)  
*Shrink—swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Sands (pe21—28)  
*Land capability (irrigated):* 3e  
*Land capability (nonirrigated):* 3e

#### Typical Profile:

Ap—0 to 8 inches; fine sand  
Bt—8 to 24 inches; loamy fine sand  
E&Bt—24 to 64 inches; stratified fine sand to loamy fine sand  
C—64 to 80 inches; fine sand

### Minor Components

#### Attica

*Composition:* About 15 percent  
*Slope:* 5 to 10 percent  
*Drainage class:* Well drained  
*Ecological site:* Sandy (pe21—28)

*General Considerations:* Most areas are in pasture or range, but some are in cropland. This mapunit is poorly suited for the most commonly grown crops. The hazard for wind erosion is severe and water erosion is moderate. This mapunit is poorly suited for most engineering practices due to the sandy textures.

## 3181—Pratt—Turon fine sands, 1 to 5 percent slopes

### Map Unit Composition

Pratt: 45 percent  
Turon: 30 percent  
Minor components: 25 percent

### Component Descriptions

#### Pratt

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Sandy eolian deposits  
*Slope:* 1 to 5 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Rapid (About 5.95 in/hr)  
*Available water capacity:* Moderate (About 6.3 inches)  
*Shrink—swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Sands (pe21—28)  
*Land capability (irrigated):* 3e  
*Land capability (nonirrigated):* 3e

#### Typical Profile:

Ap—0 to 8 inches; fine sand  
Bt—8 to 24 inches; loamy fine sand  
E&Bt—24 to 64 inches; stratified fine sand to loamy fine sand  
C—64 to 80 inches; fine sand

#### Turon

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Sandy eolian deposits over alluvium  
*Slope:* 1 to 5 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Moderate (About 7.1 inches)  
*Shrink—swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Sands (pe21—28)  
*Land capability (irrigated):* 3e  
*Land capability (nonirrigated):* 3e



*Typical Profile:*

Ap—0 to 8 inches; fine sand  
 Bt—8 to 28 inches; loamy fine sand  
 E&Bt—28 to 40 inches; stratified loamy fine sand to fine sandy loam  
 2Btb1—40 to 58 inches; silty clay  
 2Btb2—58 to 75 inches; silty clay  
 2Btb3—75 to 80 inches; silty clay

**Minor Components****Hayes**

*Composition:* About 25 percent  
*Slope:* 1 to 5 percent  
*Drainage class:* Well drained  
*Ecological site:* Sandy (pe21—28)

**Carway**

*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Subirrigated (pe21—28)

**Warnut**

*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are in cropland, but some are in pasture and range. Some areas are also in the Conservation Reserve Program. This mapunit is somewhat poorly suited for the most commonly grown crops. Wheat, grain sorghum, and irrigated corn are the predominant crops. The hazard for wind erosion is severe and water erosion is slight. Wind erosion can be controlled by plant residue management, conservation tillage, and tall grass barriers. This mapunit is moderately well suited for most engineering practices.

## 3190—Punkin silt loam, 0 to 1 percent slopes

### Map Unit Composition

Punkin: 90 percent  
 Minor components: 10 percent

### Component Descriptions

**Punkin**

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Clayey alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Moderately well drained

*Slowest permeability:* Very slow (About 0.00 in/hr)

*Available water capacity:* Moderate (About 7.3 inches)

*Shrink—swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Clay Pan (pe21—28)

*Land capability (irrigated):* 3s

*Land capability (nonirrigated):* 3s

*Typical Profile:*

Ap—0 to 4 inches; silt loam  
 Btn—4 to 8 inches; silty clay  
 Btnz1—8 to 15 inches; silty clay loam  
 Btnz2—15 to 21 inches; silty clay loam  
 Btnkz1—21 to 39 inches; silty clay loam  
 Btnkz2—39 to 47 inches; silty clay loam  
 Btnkz3—47 to 64 inches; silty clay loam  
 BC1—64 to 78 inches; sandy clay loam  
 BC2—78 to 80 inches; sandy clay loam

**Minor Components****Darlow**

*Composition:* About 10 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Clay Pan (pe21—28)

**Carbika**

*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Subirrigated (pe21—28)

**Kisiwa**

*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Saline Subirrigated (pe21—28)

*General Considerations:* Most areas are used for cropland, but some areas are used for pasture or range. This mapunit is moderately well suited for the most commonly grown crops such as wheat and grain sorghum. The hazard for wind erosion is severe and water erosion is slight. Maintaining soil tilth and soil crusting are problems but they can be improved by organic matter. The high sodium content, pH, soluble salts, and high shrink—swell potential can limit the uses of many engineering practices.



## 3191—Punkin—Taver complex, 0 to 1 percent slopes

### Map Unit Composition

Punkin: 70 percent  
Taver: 20 percent  
Minor components: 10 percent

### Component Descriptions

#### Punkin

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Clayey alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Moderate (About 7.3 inches)  
*Shrink—swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Clay Pan (pe21—28)  
*Land capability (irrigated):* 3s  
*Land capability (nonirrigated):* 3s

#### Typical Profile:

Ap—0 to 4 inches; silt loam  
Bt<sub>n</sub>—4 to 8 inches; silty clay  
Bt<sub>nz</sub>1—8 to 15 inches; silty clay loam  
Bt<sub>nz</sub>2—15 to 21 inches; silty clay loam  
Bt<sub>nkz</sub>1—21 to 39 inches; silty clay loam  
Bt<sub>nkz</sub>2—39 to 47 inches; silty clay loam  
Bt<sub>nkz</sub>3—47 to 64 inches; silty clay loam  
BC1—64 to 78 inches; sandy clay loam  
BC2—78 to 80 inches; sandy clay loam

#### Taver

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley  
*Parent material:* Clayey alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* High (About 9.4 inches)  
*Shrink—swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Clay Upland (pe21—28)  
*Land capability (irrigated):*

*Land capability (nonirrigated):* 2s

#### Typical Profile:

Ap—0 to 7 inches; loam  
2Bt<sub>1</sub>—7 to 17 inches; silty clay loam  
2Bt<sub>2</sub>—17 to 33 inches; silty clay  
2Btk<sub>1</sub>—33 to 53 inches; silty clay loam  
2Btk<sub>2</sub>—53 to 64 inches; clay loam  
3Bt—64 to 80 inches; sandy clay loam

### Minor Components

#### Darlow

*Composition:* About 10 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Clay Pan (pe21—28)

#### Carbika

*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Subirrigated (pe21—28)

#### Kisiwa

*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Saline Subirrigated (pe21—28)

*General Considerations:* Most areas are used for cropland, but some areas are used for pasture or range. This mapunit is moderately well suited for the most commonly grown crops such as wheat and grain sorghum. The hazard for wind erosion is severe and water erosion is slight. Maintaining soil tilth and soil crusting are problems but they can be improved by organic matter. The high sodium content, pH, soluble salts, and high shrink—swell potential can limit the uses of many engineering practices.

## 3403—Sand Pits

### Map Unit Composition

Sand Pit: 100 percent

## 3469—Smolan silty clay loam, 1 to 3 percent slopes

### Map Unit Composition

Smolan: 90 percent  
Minor components: 10 percent



## Component Descriptions

### Smolan

*MLRA:* 75 — Central Loess Plains

*Landform:* Hillslope on upland

*Parent material:* Loess

*Slope:* 1 to 3 percent

*Drainage class:* Moderately well drained

*Slowest permeability:* Slow (About 0.06 in/hr)

*Available water capacity:* High (About 10.4 inches)

*Shrink—swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Loamy Upland (pe25—34)

*Land capability (irrigated):* 2e

*Land capability (nonirrigated):* 2e

#### Typical Profile:

Ap—0 to 5 inches; silty clay loam

A—5 to 8 inches; silty clay loam

BA—8 to 15 inches; silt loam

Bt1—15 to 29 inches; silty clay loam

Bt2—29 to 38 inches; silty clay loam

BC1—38 to 49 inches; silty clay loam

BC2—49 to 80 inches; silty clay loam

### Minor Components

#### Longford

*Phase:* Moderately Eroded

*Composition:* About 10 percent

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe25—34)

*General Considerations:* Most areas are used as cropland. This mapunit is well suited to all commonly grown crops. Wheat, grain sorghum, and soybeans are the major crops. A few areas are planted to irrigated corn. The hazard of water and wind erosion is moderate. Ephemeral gully erosion potential is moderate in most areas. This problem can be overcome by using a conservation tillage, tall grass barriers, contour farming, terraces and waterways, and residue management. This mapunit is moderately well suited for most engineering uses. The high clay content and shrinkswell may limit some practices.

## 3510—Saltcreek—Funmar— Farnum complex, 1 to 3 percent slopes

### Map Unit Composition

Saltcreek: 50 percent

Funmar: 30 percent

Farnum: 20 percent

## Component Descriptions

### Saltcreek

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Loamy eolian deposits over alluvium

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Slowest permeability:* Slow (About 0.06 in/hr)

*Available water capacity:* High (About 9.0 inches)

*Shrink—swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Sandy (pe21—28)

*Land capability (irrigated):* 1

*Land capability (nonirrigated):* 3e

#### Typical Profile:

Ap—0 to 5 inches; fine sandy loam

Bt1—5 to 10 inches; sandy clay loam

Bt2—10 to 26 inches; sandy clay loam

Bt3—26 to 39 inches; fine sandy loam

2Btb—39 to 56 inches; silty clay

2Btkb1—56 to 66 inches; silty clay loam

2Btkb2—66 to 80 inches; silty clay loam

### Funmar

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium over alluvium

*Slope:* 1 to 3 percent

*Drainage class:* Moderately well drained

*Slowest permeability:* Slow (About 0.06 in/hr)

*Available water capacity:* High (About 10.3 inches)

*Shrink—swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Loamy Upland (pe21—28)

*Land capability (irrigated):* 1

*Land capability (nonirrigated):* 2c



*Typical Profile:*

Ap—0 to 6 inches; loam  
 A—6 to 12 inches; loam  
 Bt1—12 to 17 inches; loam  
 Bt2—17 to 26 inches; clay loam  
 Bt3—26 to 32 inches; loam  
 2Ab—32 to 38 inches; silty clay loam  
 2Btb—38 to 54 inches; silty clay loam  
 2Btkb1—54 to 66 inches; silty clay loam  
 2Btkb2—66 to 80 inches; silty clay loam

**Farnum**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Alluvium

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 10.7 inches)

*Shrink—swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Loamy Upland (pe21—28)

*Land capability (irrigated):* 1

*Land capability (nonirrigated):* 2c

*Typical Profile:*

Ap—0 to 5 inches; loam  
 A—5 to 15 inches; loam  
 Bt1—15 to 21 inches; loam  
 Bt2—21 to 34 inches; sandy clay loam  
 Bt3—34 to 48 inches; loam  
 Bt4—48 to 61 inches; clay loam  
 Bt5—61 to 73 inches; clay loam  
 Btk—73 to 80 inches; loam

**Minor Components****Carway**

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Subirrigated (pe21—28)

**Carbika**

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are in cropland, but some areas are in pasture or range. This mapunit is well suited for most commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn. The hazard for wind and water erosion is slight.

The potential for high shrink—swell may limit some engineering practices for this mapunit.

## **3511—Saltcreek And Naron fine sandy loams, 0 to 1 percent slopes**

### **Map Unit Composition**

Saltcreek: 70 percent

Naron: 30 percent

### **Component Descriptions**

**Saltcreek**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Loamy eolian deposits over alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Slowest permeability:* Slow (About 0.06 in/hr)

*Available water capacity:* High (About 9.0 inches)

*Shrink—swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Sandy (pe21—28)

*Land capability (irrigated):* 1

*Land capability (nonirrigated):* 3e

*Typical Profile:*

Ap—0 to 5 inches; fine sandy loam  
 Bt1—5 to 10 inches; sandy clay loam  
 Bt2—10 to 26 inches; sandy clay loam  
 Bt3—26 to 39 inches; fine sandy loam  
 2Btb—39 to 56 inches; silty clay  
 2Btkb1—56 to 66 inches; silty clay loam  
 2Btkb2—66 to 80 inches; silty clay loam

**Naron**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Loamy eolian deposits

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 9.1 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low



*Ecological site:* Sandy (pe21—28)

*Land capability (irrigated):* 2e

*Land capability (nonirrigated):* 2e

*Typical Profile:*

Ap—0 to 7 inches; fine sandy loam

A—7 to 19 inches; fine sandy loam

Bt1—19 to 34 inches; loam

Bt2—34 to 41 inches; sandy clay loam

Ck—41 to 61 inches; stratified loam to loamy fine sand to fine sandy loam

C—61 to 80 inches; coarse sand

*General Considerations:* Most areas are in cropland, but some areas are in pasture or range. This mapunit is well suited for most commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn. The hazard for wind and water erosion is slight. The depth to sand and potential for high shrink—swell may limit some engineering practices for this mapunit.

## 3512—Saltcreek and Naron fine sandy loams, 1 to 3 percent slopes

### Map Unit Composition

Saltcreek: 50 percent

Naron: 50 percent

Minor components: 10 percent

### Component Descriptions

#### Saltcreek

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Loamy eolian deposits over alluvium

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Slowest permeability:* Slow (About 0.06 in/hr)

*Available water capacity:* High (About 9.0 inches)

*Shrink—swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Sandy (pe21—28)

*Land capability (irrigated):* 1

*Land capability (nonirrigated):* 3e

*Typical Profile:*

Ap—0 to 5 inches; fine sandy loam

Bt1—5 to 10 inches; sandy clay loam

Bt2—10 to 26 inches; sandy clay loam

Bt3—26 to 39 inches; fine sandy loam

2Btb—39 to 56 inches; silty clay

2Btkb1—56 to 66 inches; silty clay loam

2Btkb2—66 to 80 inches; silty clay loam

#### Naron

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Loamy eolian deposits

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 9.7 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Sandy (pe21—28)

*Land capability (irrigated):* 3e

*Land capability (nonirrigated):* 3e

*Typical Profile:*

Ap—0 to 8 inches; fine sandy loam

A—8 to 14 inches; fine sandy loam

Bt1—14 to 28 inches; sandy clay loam

Bt2—28 to 39 inches; sandy clay loam

Bt3—39 to 55 inches; sandy clay loam

BC—55 to 66 inches; fine sandy loam

C—66 to 80 inches; loamy fine sand

#### Minor Components

##### Funmar

*Composition:* About 10 percent

*Slope:* 0 to 1 percent

*Drainage class:* Moderately well drained

*Ecological site:* Loamy Upland (pe21—28)

##### Carway

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Subirrigated (pe21—28)

##### Carbika

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21—28)

##### Taver

*Slope:* 0 to 1 percent

*Drainage class:* Moderately well drained

*Ecological site:* Clay Upland (pe21—28)

*General Considerations:* Most areas are in cropland, but some areas are in pasture or range. This mapunit is well suited for most commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn. The hazard for wind and water erosion is slight.



The depth to sand and potential for high shrink—swell may limit some engineering practices for this map unit.

## **3520—Saxman loamy sand, 0 to 1 percent slopes**

### **Map Unit Composition**

Saxman: 85 percent  
Minor components: 15 percent

### **Component Descriptions**

#### **Saxman**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Flood plain on river valley

*Parent material:* Sandy alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Moderately well drained

*Slowest permeability:* Rapid (About 5.95 in/hr)

*Available water capacity:* Low (About 4.4 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* Rare

*Depth to seasonal water saturation:* About 24 to 36 inches

*Runoff class:* Very low

*Ecological site:* Sandy Lowland (pe21—28)

*Land capability (irrigated):* 2e

*Land capability (nonirrigated):* 3e

#### *Typical Profile:*

Ap1—0 to 4 inches; loamy sand  
Ap2—4 to 8 inches; loamy sand  
A—8 to 13 inches; loamy sand  
AC—13 to 22 inches; loamy sand  
C1—22 to 30 inches; sand  
C2—30 to 37 inches; sand  
C3—37 to 48 inches; sand  
C4—48 to 54 inches; fine sand  
C5—54 to 80 inches; stratified gravelly coarse sand

#### **Minor Components**

##### **Willowbrook**

*Composition:* About 15 percent

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are used for pasture or range, some areas are used for hay production. This map unit is poorly suited for most commonly grown crops. The hazard for water erosion is slight and wind erosion is severe. Depth to sand and water tables can limit most engineering uses for

this map unit. Most areas are used for pasture or range, some areas are used for hay production. This map unit is poorly suited for most commonly grown crops. The hazard for water erosion is slight and wind erosion is severe. Depth to sand and water tables can limit most engineering uses for this map unit.

## **3530—Shellabarger, eroded And Albion Soils, 7 to 15 percent slopes**

### **Map Unit Composition**

Shellabarger: 45 percent  
Albion: 40 percent  
Minor components: 15 percent

### **Component Descriptions**

#### **Shellabarger**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 7 to 15 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* Moderate (About 8.5 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very high

*Ecological site:* Sandy (pe21—28)

*Land capability (nonirrigated):* 2e

#### *Typical Profile:*

Ap—0 to 5 inches; sandy loam  
Bt1—5 to 11 inches; sandy clay loam  
Bt2—11 to 19 inches; sandy clay loam  
Bt3—19 to 33 inches; sandy loam  
BC—33 to 47 inches; coarse sandy loam  
C1—47 to 59 inches; loamy sand  
C2—59 to 73 inches; sand  
C3—73 to 80 inches; sand

#### **Albion**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 7 to 15 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderately rapid (About 2.00 in/hr)



*Available water capacity:* Moderate (About 7.3 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very high

*Ecological site:* Sandy (pe21—28)

*Land capability (nonirrigated):* 3e

*Typical Profile:*

Ap—0 to 9 inches; sandy loam  
Bt1—9 to 16 inches; sandy loam  
Bt2—16 to 27 inches; sandy loam  
BC—27 to 48 inches; loamy coarse sand  
C—48 to 80 inches; sand

## Minor Components

### Clark

*Composition:* About 15 percent

*Slope:* 7 to 15 percent

*Drainage class:* Well drained

*Ecological site:* Limy Upland (pe21—28)

### Unnamed Wet Soils

*General Considerations:* Most areas are used for pasture or range. This map unit is poorly suited for cropland. The steep slopes of this map unit will limit most engineering practices for this soil.

## 3531—Shellabarger and Nalim Soils, 3 to 7 percent slopes

### Map Unit Composition

Shellabarger: 50 percent

Nalim: 50 percent

### Component Descriptions

#### Shellabarger

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 3 to 7 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* Moderate (About 8.5 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Medium

*Ecological site:* Sandy (pe21—28)

*Land capability (nonirrigated):* 2e

*Typical Profile:*

Ap—0 to 6 inches; sandy loam  
Bt1—6 to 11 inches; sandy clay loam  
Bt2—11 to 19 inches; sandy clay loam  
Bt3—19 to 33 inches; sandy loam  
BC—33 to 47 inches; coarse sandy loam  
C1—47 to 59 inches; loamy sand  
C2—59 to 73 inches; sand  
C3—73 to 80 inches; sand

### Nalim

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 3 to 7 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderately slow (About 0.20 in/hr)

*Available water capacity:* High (About 10.4 inches)

*Shrink—swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Medium

*Ecological site:* Loamy Upland (pe24—32)

*Land capability (irrigated):* 2e

*Land capability (nonirrigated):* 2e

*Typical Profile:*

Ap—0 to 6 inches; loam  
Bt1—6 to 9 inches; loam  
Bt2—9 to 13 inches; clay loam  
Bt3—13 to 21 inches; clay loam  
Bt4—21 to 31 inches; clay loam  
Bt5—31 to 39 inches; sandy clay loam  
Bt6—39 to 44 inches; gravelly sandy clay loam  
Bt7—44 to 52 inches; sandy clay loam  
BC—52 to 62 inches; loamy coarse sand  
C1—62 to 72 inches; gravelly loamy coarse sand  
C2—72 to 80 inches; stratified sand to gravelly loamy coarse sand

*General Considerations:* Most areas are used as cropland or hayland, but some areas are in pasture or range. This map unit is moderately well suited to all of the commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the main crops. The hazard of wind erosion is slight and water erosion is severe for these soils. Ephemeral gully erosion potential is moderate for these soils. Wind and water erosion can be controlled by maintaining



plant residue through the use of a conservation tillage system, strip cropping, field windbreaks, contour farming, tall grass barriers, terraces and grassed waterways. The moderate water holding capacity of these soils can limit production. This problem can be minimized by increasing organic matter, leaving plant residue, and conservation tillage. These soils are moderately well suited for most engineering uses of these soils, except where steep slopes can limit the practice.

### **3532—Shellabarger loamy sand, 0 to 3 percent slopes**

#### **Map Unit Composition**

Shellabarger: 80 percent  
Minor components: 20 percent

#### **Component Descriptions**

##### **Shellabarger**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 0 to 3 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* Moderate (About 8.1 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Sandy (pe21—28)

*Land capability (irrigated):*

*Land capability (nonirrigated):* 2e

##### *Typical Profile:*

A—0 to 6 inches; loamy sand  
Bt1—6 to 11 inches; sandy clay loam  
Bt2—11 to 19 inches; sandy clay loam  
Bt3—19 to 33 inches; sandy loam  
BC—33 to 47 inches; coarse sandy loam  
C1—47 to 59 inches; loamy sand  
C2—59 to 73 inches; sand  
C3—73 to 80 inches; sand

#### **Minor Components**

##### **Albion**

*Composition:* About 20 percent

*Slope:* 0 to 3 percent

*Drainage class:* Well drained

*Ecological site:* Sandy (pe21—28)

*General Considerations:* Most areas are used as cropland, but some areas are in pasture or range. This map unit is moderately well suited to all of the commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the main crops. The hazard of wind erosion is severe and the hazard of water erosion is moderate for these soils. Ephemeral gully erosion potential is moderate for these soils. Wind and water erosion can be controlled maintaining plant residue through the use of a conservation tillage system, strip cropping, field windbreaks, contour farming, tall grass barriers, terraces and grassed waterways. The moderate water holding capacity of these soils can limit production. This problem can be minimized by increasing organic matter, leaving plant residue, and conservation tillage. In some places, soil test results may show soil reaction (pH) in the strongly acid range. Additions of lime may be required for optimum nutrient balance. The moderately rapid permeability and relatively shallow depths to sandy textures can limit some of the engineering uses of these soils.

### **3533—Shellabarger sandy loam, 0 to 1 percent slopes**

#### **Map Unit Composition**

Shellabarger: 85 percent  
Minor components: 15 percent

#### **Component Descriptions**

##### **Shellabarger**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* Moderate (About 8.5 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Sandy (pe21—28)



*Land capability (nonirrigated): 2e*

*Typical Profile:*

Ap—0 to 7 inches; sandy loam  
Bt1—7 to 11 inches; sandy clay loam  
Bt2—11 to 19 inches; sandy clay loam  
Bt3—19 to 33 inches; sandy loam  
BC—33 to 47 inches; coarse sandy loam  
C1—47 to 59 inches; loamy sand  
C2—59 to 73 inches; sand  
C3—73 to 80 inches; sand

**Minor Components**

**Nalim**

*Composition:* About 15 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe24—32)

**Unnamed Wet Soils**

*General Considerations:* Most areas are used as cropland, but some areas are in pasture or range. This map unit is moderately well suited to all of the commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the main crops. The hazard of wind erosion is severe and the hazard of water erosion is slight. Wind erosion can be controlled by maintaining plant residue through the use of a conservation tillage system. The moderate water holding capacity can hurt production. This problem can be minimized by increasing organic matter, leaving plant residue, and conservation tillage. In some places, soil test results may show soil reaction (pH) in the strongly acid range. Additions of lime may be required for optimum nutrient balance. The moderately rapid permeability and relatively shallow depths to sandy textures can limit some of the engineering uses of this soil.

**3534—Shellabarger sandy loam, 1 to 3 percent slopes**

**Map Unit Composition**

Shellabarger: 85 percent  
Minor components: 15 percent

**Component Descriptions**

**Shellabarger**

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* Moderate (About 8.5 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Sandy (pe21—28)

*Land capability (irrigated):*

*Land capability (nonirrigated): 2e*

*Typical Profile:*

Ap—0 to 7 inches; sandy loam  
Bt1—7 to 11 inches; sandy clay loam  
Bt2—11 to 19 inches; sandy clay loam  
Bt3—19 to 33 inches; sandy loam  
BC—33 to 47 inches; coarse sandy loam  
C1—47 to 59 inches; loamy sand  
C2—59 to 73 inches; sand  
C3—73 to 80 inches; sand

**Minor Components**

**Albion**

*Composition:* About 15 percent  
*Slope:* 1 to 3 percent  
*Drainage class:* Well drained  
*Ecological site:* Sandy (pe21—28)

**Unnamed Wet Soils**

*General Considerations:* Most areas are used as cropland, but some areas are in pasture or range. This map unit is moderately well suited to all of the commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the main crops. The hazard of wind erosion is severe and the hazard of water erosion is moderate for these soils. Ephemeral gully erosion potential is moderate for these soils. Wind and water erosion can be controlled by maintaining plant residue through the use of a conservation tillage system, strip cropping, field windbreaks, contour farming, tall grass barriers, terraces and grassed waterways. The moderate water holding capacity of these soils can limit production. This problem can be minimized by increasing organic matter, leaving plant residue, and conservation tillage. In some places, soil test results may show soil reaction (pH) in the strongly acid range. Additions of lime may be required for optimum nutrient balance. The moderately rapid permeability



and relatively shallow depths to sandy textures can limit some of the engineering uses of these soils.

### **3535—Shellabarger—Nalim complex, 1 to 3 percent slopes**

#### **Map Unit Composition**

Shellabarger: 55 percent  
Nalim: 45 percent

#### **Component Descriptions**

##### **Shellabarger**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* Moderate (About 8.5 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Sandy (pe21—28)

*Land capability (irrigated):*

*Land capability (nonirrigated):* 2e

##### *Typical Profile:*

Ap—0 to 7 inches; sandy loam  
Bt1—7 to 11 inches; sandy clay loam  
Bt2—11 to 19 inches; sandy clay loam  
Bt3—19 to 33 inches; sandy loam  
BC—33 to 47 inches; coarse sandy loam  
C1—47 to 59 inches; loamy sand  
C2—59 to 73 inches; sand  
C3—73 to 80 inches; sand

##### **Nalim**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 1 to 3 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderately slow (About 0.20 in/hr)

*Available water capacity:* High (About 10.4 inches)

*Shrink—swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Loamy Upland (pe24—32)

*Land capability (irrigated):* 2e

*Land capability (nonirrigated):* 2e

##### *Typical Profile:*

Ap—0 to 6 inches; loam  
Bt1—6 to 9 inches; loam  
Bt2—9 to 13 inches; clay loam  
Bt3—13 to 21 inches; clay loam  
Bt4—21 to 31 inches; clay loam  
Bt5—31 to 39 inches; sandy clay loam  
Bt6—39 to 44 inches; gravelly sandy clay loam  
Bt7—44 to 52 inches; sandy clay loam  
BC—52 to 62 inches; loamy coarse sand  
C1—62 to 72 inches; gravelly loamy coarse sand  
C2—72 to 80 inches; stratified sand to gravelly loamy coarse sand

#### **Minor Components**

##### **Unnamed Wet Soils**

*General Considerations:* Most areas are used as cropland, but some areas are in pasture or range. This map unit is moderately well suited to all of the commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the main crops. The hazard of wind and water erosion is moderate for these soils. Ephemeral gully erosion potential is moderate for these soils. Wind and water erosion can be controlled by maintaining plant residue through the use of a conservation tillage system, strip cropping, field windbreaks, contour farming, tall grass barriers, terraces and grassed waterways. The moderate water holding capacity of these soils can limit production. This problem can be minimized by increasing organic matter, leaving plant residue, and conservation tillage. These soils are moderately well suited for most engineering uses of these soils.

### **3540—Solvay loamy fine sand, 0 to 2 percent slopes**

#### **Map Unit Composition**

Solvay: 90 percent

Minor components: 10 percent



## Component Descriptions

### Solvay

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Interdune on paleoterrace on river valley

*Parent material:* Loamy eolian deposits over alluvium

*Slope:* 0 to 2 percent

*Drainage class:* Somewhat poorly drained

*Slowest permeability:* Moderately slow (About 0.20 in/hr)

*Available water capacity:* Moderate (About 9.0 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* About 24 to 48 inches

*Runoff class:* Very low

*Ecological site:* Subirrigated (pe21—28)

*Land capability (irrigated):*

*Land capability (nonirrigated):* 2e

#### Typical Profile:

A—0 to 5 inches; loamy fine sand  
2Bt1—5 to 14 inches; fine sandy loam  
2Bt2—14 to 23 inches; fine sandy loam  
2Bt3—23 to 37 inches; fine sandy loam  
2BC1—37 to 58 inches; fine sandy loam  
2BC2—58 to 76 inches; loamy fine sand  
2BC3—76 to 80 inches; loamy fine sand

### Minor Components

#### Hayes

*Composition:* About 10 percent

*Slope:* 0 to 2 percent

*Drainage class:* Well drained

*Ecological site:* Sandy (pe21—28)

#### Carway

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Subirrigated (pe21—28)

#### Carbika

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are in cropland, but some areas are used for pasture and range. Many areas are in the Conservation Reserve Program. This mapunit is somewhat poorly suited for the most commonly grown crops. Wheat, grain sorghum and irrigated corn are the predominant crops. The hazard for wind erosion is severe and water erosion is slight. Conservation tillage, residue management, and tall grass barriers are ways to control

wind erosion. The depth to water tables will limit many engineering practices.

## 3550—Spelvin loamy sand, 0 to 1 percent slopes

### Map Unit Composition

Spelvin: 100 percent

## Component Descriptions

### Spelvin

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Interdune on paleoterrace on river valley

*Parent material:* Eolian deposits over alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* Moderate (About 8.4 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Sandy (pe21—28)

*Land capability (irrigated):*

*Land capability (nonirrigated):* 2e

#### Typical Profile:

Ap—0 to 5 inches; loamy sand  
2Bt1—5 to 23 inches; sandy clay loam  
2Bt2—23 to 34 inches; sandy clay loam  
2Bt3—34 to 50 inches; sandy loam  
2BC—50 to 58 inches; loamy sand  
2C—58 to 80 inches; sand

*General Considerations:* Most areas are in cropland, but some areas are used for pasture and range. Many areas are in the Conservation Reserve Program. This mapunit is somewhat poorly suited for the most commonly grown crops. Wheat, grain sorghum and irrigated corn are the predominant crops. The hazard for wind erosion is severe and water erosion is slight. Conservation tillage, residue management, and tall grass barriers are ways to control wind erosion. This map unit is moderately well suited for most engineering practices.



### 3639—Taver loam, 0 to 1 percent slopes

#### Map Unit Composition

Taver: 90 percent  
Minor components: 10 percent

#### Component Descriptions

##### Taver

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Paleoterrace on river valley

*Parent material:* Clayey alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Moderately well drained

*Slowest permeability:* Very slow (About 0.00 in/hr)

*Available water capacity:* High (About 9.4 inches)

*Shrink—swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Clay Upland (pe21—28)

*Land capability (nonirrigated):* 2s

##### Typical Profile:

Ap—0 to 7 inches; loam

2Bt1—7 to 17 inches; silty clay loam

2Bt2—17 to 33 inches; silty clay

2Btk1—33 to 53 inches; silty clay loam

2Btk2—53 to 64 inches; clay loam

3Bt—64 to 80 inches; sandy clay loam

#### Minor Components

##### Saltcreek

*Composition:* About 10 percent

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Ecological site:* Sandy (pe21—28)

##### Carbika

*Composition:* About

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are used for cropland, but some areas are in pasture or range. This mapunit is well suited for the most commonly grown crops such as wheat, grain sorghum, soybeans, and irrigated corn. The hazard for wind and water erosion is slight. This mapunit is moderately well suited for most engineering practices. The

potential for high shrink—swell may limit some practices.

### 3640—Tivin fine sand, 10 to 30 percent slopes

#### Map Unit Composition

Tivin: 95 percent  
Minor components: 5 percent

#### Component Descriptions

##### Tivin

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Sandy eolian deposits

*Slope:* 10 to 30 percent

*Drainage class:* Somewhat excessively drained

*Slowest permeability:* Rapid (About 5.95 in/hr)

*Available water capacity:* Low (About 3.2 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Ponding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Medium

*Ecological site:* Choppy Sands (pe21—28)

*Land capability (nonirrigated):* 6e

##### Typical Profile:

A—0 to 7 inches; fine sand

AC—7 to 18 inches; fine sand

C—18 to 80 inches; fine sand

#### Minor Components

##### Langdon

*Composition:* About 5 percent

*Slope:* 10 to 30 percent

*Drainage class:* Somewhat excessively drained

*Ecological site:* Choppy Sands (pe21—28)

##### Plev

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are in pasture or range. This mapunit is poorly suited for the most commonly grown crops. The hazard for wind erosion is severe and water erosion is moderate. The sandy textures will limit most engineering practices.



## 3641—Tivin—Dillhut fine sands, 0 to 15 percent slopes

### Map Unit Composition

Tivin: 45 percent  
Dillhut: 40 percent  
Minor components: 15 percent

### Component Descriptions

#### Tivin

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Sandy eolian deposits  
*Slope:* 1 to 15 percent  
*Drainage class:* Somewhat excessively drained  
*Slowest permeability:* Rapid (About 5.95 in/hr)  
*Available water capacity:* Low (About 3.2 inches)  
*Shrink—swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Ponding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Choppy Sands (pe21—28)  
*Land capability (nonirrigated):* 6e

#### Typical Profile:

A—0 to 7 inches; fine sand  
AC—7 to 18 inches; fine sand  
C—18 to 80 inches; fine sand

#### Dillhut

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Eolian deposits over alluvium  
*Slope:* 0 to 7 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Moderate (About 6.0 inches)  
*Shrink—swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Sands (pe21—28)  
*Land capability (irrigated):* 3e  
*Land capability (nonirrigated):* 3e

#### Typical Profile:

A—0 to 4 inches; fine sand  
AC—4 to 9 inches; fine sand  
C1—9 to 18 inches; fine sand  
C2—18 to 26 inches; fine sand  
2Btb1—26 to 41 inches; fine sandy loam  
2Btb2—41 to 55 inches; fine sandy loam

2BCb1—55 to 65 inches; fine sandy loam  
2BCb2—65 to 70 inches; fine sandy loam  
2Cg—70 to 80 inches; fine sandy loam

### Minor Components

#### Solvay

*Composition:* About 15 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Subirrigated (pe21—28)

#### Carway

*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Subirrigated (pe21—28)

#### Warnut

*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Subirrigated (pe21—28)

#### Plev

*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are in pasture or range. This mapunit is poorly suited for most commonly grown crops. The hazard for wind erosion is severe and water erosion is slight. This mapunit is poorly suited for most engineering practices.

## 3642—Tivin—Willowbrook, occasionally flooded, complex, 0 to 12 percent slopes

### Map Unit Composition

Tivin: 70 percent  
Willowbrook: 30 percent

### Component Descriptions

#### Tivin

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Dune on flood plain on river valley  
*Parent material:* Sandy eolian deposits  
*Slope:* 1 to 12 percent  
*Drainage class:* Somewhat excessively drained  
*Slowest permeability:* Moderately rapid (About 2.00 in/hr)  
*Available water capacity:* Low (About 4.1 inches)  
*Shrink—swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Ponding hazard:* None



*Depth to seasonal water saturation:* About 60 to 80 inches

*Runoff class:* Very low

*Ecological site:* Choppy Sands (pe21—28)

*Land capability (nonirrigated):* 6e

*Typical Profile:*

A—0 to 11 inches; fine sand

C1—11 to 53 inches; fine sand

2C2—53 to 63 inches; silt loam

2C3—63 to 80 inches; sand

**Willowbrook**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Flood plain on river valley

*Parent material:* Loamy alluvium over sandy alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Slowest permeability:* Moderately rapid (About 2.00 in/hr)

*Available water capacity:* Low (About 5.7 inches)

*Shrink—swell potential:* Low (About 1.7 LEP)

*Flooding hazard:* Occasional

*Ponding hazard:* None

*Depth to seasonal water saturation:* About 24 to 48 inches

*Runoff class:* Very low

*Ecological site:* Subirrigated (pe21—28)

*Land capability (irrigated):* 2e

*Land capability (nonirrigated):* 3e

*Typical Profile:*

Ap1—0 to 4 inches; fine sandy loam

Ap2—4 to 9 inches; fine sandy loam

AB—9 to 13 inches; fine sandy loam

Bw—13 to 17 inches; fine sandy loam

Bk1—17 to 19 inches; loam

Bk2—19 to 26 inches; fine sandy loam

2C1—26 to 45 inches; coarse sand

2C2—45 to 51 inches; coarse sand

2C3—51 to 80 inches; stratified gravelly coarse sand to sand

*General Considerations:* Most areas are in pasture or range. This mapunit is poorly suited for most commonly grown crops. The hazard for wind erosion is severe and water erosion is slight. The sandy textures and water tables limit most engineering uses of this mapunit.

**3643—Tobin silt loam, 0 to 1 percent slopes, occasionally flooded**

**Map Unit Composition**

Tobin: 100 percent

**Component Descriptions**

**Tobin**

*MLRA:* 75 — Central Loess Plains

*Landform:* Flood plain on river valley

*Parent material:* Silty alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* High (About 11.9 inches)

*Shrink—swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* Occasional

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Loamy Lowland (pe25—34)

*Land capability (nonirrigated):* 2w

*Typical Profile:*

Ap—0 to 6 inches; silt loam

A1—6 to 15 inches; silty clay loam

A2—15 to 34 inches; silt loam

C—34 to 47 inches; silt loam

Ab—47 to 80 inches; silty clay loam

**Minor Components**

**Unnamed Wet Soils**

*General Considerations:* Most areas are used as cropland. This mapunit is well suited to all commonly grown crops. Wheat, grain sorghum, and soybeans are the major crops. A few areas are planted to irrigated corn. The hazard of water erosion is slight and wind erosion is moderate. This problem can be overcome by using a conservation tillage and residue management. This mapunit is poorly suited for most engineering uses due to the flooding hazard.

**3644—Turon—Carway complex, 0 to 5 percent slopes**

**Map Unit Composition**

Turon: 65 percent

Carway: 20 percent

Minor components: 15 percent



## Component Descriptions

### Turon

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Dune on paleoterrace on river valley

*Parent material:* Sandy eolian deposits over alluvium

*Slope:* 0 to 5 percent

*Drainage class:* Well drained

*Slowest permeability:* Very slow (About 0.00 in/hr)

*Available water capacity:* Moderate (About 7.1 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Sands (pe21—28)

*Land capability (irrigated):* 3e

*Land capability (nonirrigated):* 3e

#### Typical Profile:

Ap—0 to 8 inches; fine sand

Bt—8 to 28 inches; loamy fine sand

E&Bt—28 to 40 inches; stratified loamy fine sand to fine sandy loam

2Btb1—40 to 58 inches; silty clay

2Btb2—58 to 75 inches; silty clay

2Btb3—75 to 80 inches; silty clay

### Carway

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Interdune on depression on paleoterrace on river valley

*Parent material:* Loamy eolian deposits over alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Slowest permeability:* Very slow (About 0.00 in/hr)

*Available water capacity:* Moderate (About 8.6 inches)

*Shrink—swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

*Ponding hazard:* Frequent

*Depth to seasonal water saturation:* About 0 to 0 inches

*Runoff class:* Very low

*Ecological site:* Subirrigated (pe21—28)

*Land capability (irrigated):*

*Land capability (nonirrigated):* 2w

#### Typical Profile:

Ap—0 to 7 inches; loamy fine sand

Bt1—7 to 10 inches; sandy clay loam

Bt2—10 to 15 inches; sandy clay loam

Bt3—15 to 22 inches; fine sandy loam

Bt4—22 to 35 inches; fine sandy loam

2Btb1—35 to 40 inches; clay loam

2Btb2—40 to 54 inches; clay loam

2Btb3—54 to 63 inches; clay loam

2Btb4—63 to 72 inches; clay loam

2Btkb—72 to 80 inches; clay loam

## Minor Components

### Solvay

*Composition:* About 15 percent

*Slope:* 0 to 2 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are used for cropland, but some areas are in pasture or range. This mapunit is somewhat poorly suited for most commonly grown crops. Wheat and grain sorghum are the predominant crops grown. The hazard for wind erosion is severe and water erosion is slight. Wind erosion can be controlled by plant residue management, conservation tillage, and tall grass barriers. The high water tables, high shrink—swell potential, and sandy textures will limit most engineering uses of this mapunit.

## 3760—Urban land—Blazefork—Kaskan complex, 0 to 1 percent slopes, protected

## Map Unit Composition

Urban land: 50 percent

Blazefork: 25 percent

Kaskan: 25 percent

## Component Descriptions

### Urban land

*MLRA:* 79 — Great Bend Sand Plains

*Slope:* 0 to 1 percent

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very high

### Blazefork

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Stream terrace on river valley

*Parent material:* Silty alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Moderately well drained

*Slowest permeability:* Slow (About 0.06 in/hr)

*Available water capacity:* High (About 9.3 inches)

*Shrink—swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None



*Depth to seasonal water saturation:* About 48 to 48 inches

*Runoff class:* Very low

*Ecological site:* Clay Lowland (pe25—34)

*Land capability (irrigated):* 2s

*Land capability (nonirrigated):* 2s

*Typical Profile:*

Ap1—0 to 3 inches; silty clay loam  
 Ap2—3 to 7 inches; silty clay loam  
 Bt—7 to 14 inches; silty clay  
 Btss—14 to 22 inches; silty clay  
 Bt1—22 to 29 inches; silty clay  
 Bt2—29 to 34 inches; silty clay  
 Bt3—34 to 40 inches; silty clay  
 Bt4—40 to 48 inches; silty clay loam  
 2Bt5—48 to 61 inches; clay loam  
 2Bt6—61 to 80 inches; loam

**Kaskan**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Flood plain on river valley

*Parent material:* Loamy alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* Moderate (About 8.7 inches)

*Shrink—swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* About 60 to 60 inches

*Runoff class:* Very low

*Ecological site:* Loamy Lowland (pe21—28)

*Land capability (irrigated):*

*Land capability (nonirrigated):* 2w

*Typical Profile:*

Ap—0 to 7 inches; loam  
 A—7 to 17 inches; clay loam  
 Bw1—17 to 24 inches; loam  
 Bw2—24 to 35 inches; fine sandy loam  
 BC—35 to 41 inches; loamy fine sand  
 C1—41 to 47 inches; fine sand  
 C2—47 to 66 inches; sand  
 C3—66 to 80 inches; stratified gravelly coarse sand to sand

**Minor Components**

**Unnamed Wet Soils**

*General Considerations:* All of the area within the mapunit has been used for development within the city of Hutchinson. Some areas on the edge of the city limits are used for cropland production.

**3762—Urban land—Darlow—Elmer complex, 0 to 1 percent slopes**

**Map Unit Composition**

Urban land: 50 percent

Darlow: 25 percent

Elmer: 15 percent

Minor components: 10 percent

**Component Descriptions**

**Urban land**

*MLRA:* 79 — Great Bend Sand Plains

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very high

**Darlow**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Terrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Slowest permeability:* Very slow (About 0.00 in/hr)

*Available water capacity:* Moderate (About 7.6 inches)

*Shrink—swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Clay Pan (pe21—28)

*Land capability (irrigated):* 4s

*Land capability (nonirrigated):* 4s

*Typical Profile:*

Ap1—0 to 5 inches; loam  
 Ap2—5 to 8 inches; loam  
 Btn—8 to 14 inches; loam  
 Btny—14 to 20 inches; clay loam  
 Btknyz—20 to 26 inches; loam  
 Btnz1—26 to 33 inches; loam  
 Btnz2—33 to 44 inches; loam  
 Btn1—44 to 53 inches; loam  
 Btn2—53 to 68 inches; loam  
 2Btn3—68 to 80 inches; sandy loam

**Elmer**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Terrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Moderately well drained

*Slowest permeability:* Slow (About 0.06 in/hr)



*Available water capacity:* High (About 9.1 inches)

*Shrink—swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very low

*Ecological site:* Loamy Terrace (pe21—28)

*Land capability (irrigated):* 3s

*Land capability (nonirrigated):* 3s

*Typical Profile:*

Ap1—0 to 6 inches; fine sandy loam

Ap2—6 to 9 inches; fine sandy loam

AB—9 to 19 inches; fine sandy loam

Btn1—19 to 26 inches; fine sandy loam

Btn2—26 to 37 inches; fine sandy loam

Btnk1—37 to 41 inches; loam

Btnk2—41 to 51 inches; clay loam

Btnk3—51 to 61 inches; fine sandy loam

Btn1'—61 to 72 inches; fine sandy loam

Btn2'—72 to 80 inches; fine sandy loam

## Minor Components

### Punkin

*Composition:* About 10 percent

*Slope:* 0 to 1 percent

*Drainage class:* Moderately well drained

*Ecological site:* Clay Pan (pe21—28)

### Carbika

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* All of the area within the mapunit has been used for development within the city of Hutchinson. Some areas on the edge of the city limits are used for cropland production.

## 3763—Urban land—Imano complex, 0 to 1 percent slopes, Protected

### Map Unit Composition

Urban land: 50 percent

Imano: 40 percent

Minor components: 10 percent

### Component Descriptions

#### Urban land

*MLRA:* 79 — Great Bend Sand Plains

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very high

*Land capability (irrigated):*

### Imano

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Flood plain on river valley

*Parent material:* Loamy alluvium over sandy alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Slowest permeability:* Moderately slow (About 0.20 in/hr)

*Available water capacity:* Moderate (About 6.6 inches)

*Shrink—swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Ponding hazard:* None

*Depth to seasonal water saturation:* About 24 to 48 inches

*Runoff class:* Very low

*Ecological site:* Subirrigated (pe21—28)

*Land capability (irrigated):*

*Land capability (nonirrigated):* 3w

*Typical Profile:*

Ap—0 to 10 inches; clay loam

Bw—10 to 25 inches; loam

2C1—25 to 55 inches; stratified fine sand to sand

2C2—55 to 80 inches; coarse sand

## Minor Components

### Willowbrook

*Phase:* Protected

*Composition:* About 10 percent

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Subirrigated (pe21—28)

### Kanza

*Slope:* 0 to 2 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21—28)

### Ninnescah

*Slope:* 0 to 2 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* All of the area within the mapunit has been used for development within the city of Hutchinson. Some areas on the edge of the city limits are used for cropland production.



### 3764—Urban land—Mahone complex, 0 to 1 percent slopes, protected

#### Map Unit Composition

Urban land: 60 percent  
Mahone: 35 percent  
Minor components: 5 percent

#### Component Descriptions

##### Urban land

*MLRA:* 79 — Great Bend Sand Plains  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very high

##### Mahone

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Flood plain on river valley  
*Parent material:* Loamy alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Moderate (About 8.9 inches)  
*Shrink—swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 60 to 60 inches  
*Ecological site:* Loamy Lowland (pe21—28)  
*Land capability (nonirrigated):* 2w

##### Typical Profile:

Ap—0 to 8 inches; loamy fine sand  
A—8 to 14 inches; fine sandy loam  
Bw1—14 to 20 inches; fine sandy loam  
Bw2—20 to 25 inches; very fine sandy loam  
Bw3—25 to 33 inches; silt loam  
2C—33 to 39 inches; stratified silt loam to fine sandy loam  
2Ab1—39 to 42 inches; clay loam  
2Ab2—42 to 48 inches; fine sandy loam  
2Bwb1—48 to 54 inches; very fine sandy loam  
2Bwb2—54 to 61 inches; fine sandy loam  
2Ab—61 to 66 inches; fine sandy loam  
2Bwb—66 to 71 inches; fine sandy loam  
3BC—71 to 78 inches; loamy fine sand  
3C—78 to 80 inches; coarse sand

##### Minor Components

##### Yaggy

*Phase:* Protected  
*Composition:* About 5 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Somewhat poorly drained

*Ecological site:* Sandy Lowland (pe21—28)

*General Considerations:* All of the area within the mapunit has been used for development within the city of Hutchinson. Some areas on the edge of the city limits are used for cropland production.

### 3765—Urban land—Saltcreek—Naron complex, 0 to 1 percent slopes

#### Map Unit Composition

Urban land: 50 percent  
Saltcreek: 35 percent  
Naron: 15 percent

#### Component Descriptions

##### Urban land

*MLRA:* 79 — Great Bend Sand Plains  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very high

##### Saltcreek

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Loamy eolian deposits over alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 9.0 inches)  
*Shrink—swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Sandy (pe21—28)  
*Land capability (irrigated):* 1  
*Land capability (nonirrigated):* 3e

##### Typical Profile:

Ap—0 to 5 inches; fine sandy loam  
Bt1—5 to 10 inches; sandy clay loam  
Bt2—10 to 26 inches; sandy clay loam  
Bt3—26 to 39 inches; fine sandy loam  
2Btb—39 to 56 inches; silty clay  
2Btkb1—56 to 66 inches; silty clay loam  
2Btkb2—66 to 80 inches; silty clay loam

##### Naron

*MLRA:* 79 — Great Bend Sand Plains



*Landform:* Dune on paleoterrace on river valley  
*Parent material:* Loamy eolian deposits  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* High (About 9.1 inches)  
*Shrink—swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Sandy (pe21—28)  
*Land capability (irrigated):* 2e  
*Land capability (nonirrigated):* 2e

*Typical Profile:*

Ap—0 to 7 inches; fine sandy loam  
 A—7 to 19 inches; fine sandy loam  
 Bt1—19 to 34 inches; loam  
 Bt2—34 to 41 inches; sandy clay loam  
 Ck—41 to 61 inches; stratified loam to loamy fine sand to fine sandy loam  
 C—61 to 80 inches; coarse sand

*General Considerations:* All of the area within the mapunit has been used for development within the city of Hutchinson. Some areas on the edge of the city limits are used for cropland production.

### **3766—Urban land—Saxman complex, 0 to 1 percent slopes, protected**

#### **Map Unit Composition**

Urban land: 50 percent  
 Saxman: 45 percent  
 Minor components: 5 percent

#### **Component Descriptions**

##### **Urban land**

*MLRA:* 79 — Great Bend Sand Plains  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very high

##### **Saxman**

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Flood plain on river valley  
*Parent material:* Sandy alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Moderately well drained

*Slowest permeability:* Rapid (About 5.95 in/hr)  
*Available water capacity:* Low (About 4.4 inches)  
*Shrink—swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 24 to 36 inches  
*Runoff class:* Very low  
*Ecological site:* Sandy Lowland (pe21—28)  
*Land capability (irrigated):* 2e  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

Ap1—0 to 4 inches; loamy sand  
 Ap2—4 to 8 inches; loamy sand  
 A—8 to 13 inches; loamy sand  
 AC—13 to 22 inches; loamy sand  
 C1—22 to 30 inches; sand  
 C2—30 to 37 inches; sand  
 C3—37 to 48 inches; sand  
 C4—48 to 54 inches; fine sand  
 C5—54 to 80 inches; stratified gravelly coarse sand

#### **Minor Components**

##### **Willowbrook**

*Phase:* Protected  
*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* All of the area within the mapunit has been used for development within the city of Hutchinson. Some areas on the edge of the city limits are used for cropland production.

### **3767—Urban land—Willowbrook complex, 0 to 1 percent slopes, protected**

#### **Map Unit Composition**

Urban land: 50 percent  
 Willowbrook: 45 percent  
 Minor components: 5 percent

#### **Component Descriptions**

##### **Urban land**

*MLRA:* 79 — Great Bend Sand Plains  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very high

##### **Willowbrook**

*MLRA:* 79 — Great Bend Sand Plains



*Landform:* Flood plain on river valley

*Parent material:* Loamy alluvium over sandy alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Slowest permeability:* Moderately rapid (About 2.00 in/hr)

*Available water capacity:* Low (About 5.7 inches)

*Shrink—swell potential:* Low (About 1.7 LEP)

*Flooding hazard:* None

*Ponding hazard:* None

*Depth to seasonal water saturation:* About 24 to 48 inches

*Runoff class:* Very low

*Ecological site:* Subirrigated (pe21—28)

*Land capability (irrigated):* 2e

*Land capability (nonirrigated):* 3e

*Typical Profile:*

Ap1—0 to 4 inches; fine sandy loam

Ap2—4 to 9 inches; fine sandy loam

AB—9 to 13 inches; fine sandy loam

Bw—13 to 17 inches; fine sandy loam

Bk1—17 to 19 inches; loam

Bk2—19 to 26 inches; fine sandy loam

2C1—26 to 45 inches; coarse sand

2C2—45 to 51 inches; coarse sand

2C3—51 to 80 inches; stratified gravelly coarse sand to sand

### Minor Components

#### Nickerson

*Phase:* Protected

*Composition:* About 5 percent

*Slope:* 0 to 1 percent

*Drainage class:* Moderately well drained

*Ecological site:* Sandy (pe21—28)

#### Kanza

*Slope:* 0 to 2 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21—28)

#### Ninnescah

*Slope:* 0 to 2 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* All of the area within the mapunit has been used for development within the city of Hutchinson. Some areas on the edge of the city limits are used for cropland production.

## 3768—Urban land—Yaggy complex, 0 to 1 percent slopes, protected

### Map Unit Composition

Urban land: 50 percent

Yaggy: 45 percent

Minor components: 5 percent

### Component Descriptions

#### Urban land

*MLRA:* 79 — Great Bend Sand Plains

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very high

#### Yaggy

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Flood plain on river valley

*Parent material:* Loamy alluvium over sandy alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* Low (About 4.5 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* About 24 to 48 inches

*Runoff class:* Very low

*Ecological site:* Sandy Lowland (pe21—28)

*Land capability (irrigated):* 2e

*Land capability (nonirrigated):* 3e

*Typical Profile:*

Ap1—0 to 5 inches; fine sandy loam

Ap2—5 to 11 inches; fine sandy loam

2C1—11 to 14 inches; stratified very fine sandy loam to silt loam

3C2—14 to 24 inches; fine sand

3C3—24 to 31 inches; fine sand

3C4—31 to 42 inches; fine sand

3C5—42 to 53 inches; stratified gravelly coarse sand

3C6—53 to 69 inches; stratified gravelly coarse sand to sand

3C7—69 to 80 inches; stratified gravelly coarse sand to sand

### Minor Components

#### Imano

*Phase:* Protected

*Composition:* About 5 percent

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained



*Ecological site:* Subirrigated (pe21—28)

#### **Kanza**

*Slope:* 0 to 2 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21—28)

#### **Ninnescah**

*Slope:* 0 to 2 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* All of the area within the mapunit has been used for development within the city of Hutchinson. Some areas on the edge of the city limits are used for cropland production.

### **3900—Warnut fine sandy loam, 0 to 1 percent slopes**

#### **Map Unit Composition**

Warnut: 75 percent

Minor components: 25 percent

#### **Component Descriptions**

##### **Warnut**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Depression on paleoterrace on river valley, interdune on paleoterrace on river valley

*Parent material:* Loamy alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* Moderate (About 8.3 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Ponding hazard:* Frequent

*Depth to seasonal water saturation:* About 0 to 0 inches

*Runoff class:* Very low

*Ecological site:* Subirrigated (pe21—28)

*Land capability (nonirrigated):* 2w

##### *Typical Profile:*

A—0 to 2 inches; fine sandy loam

Bt1—2 to 5 inches; loam

Bt2—5 to 11 inches; sandy clay loam

Bt3—11 to 15 inches; fine sandy loam

BC1—15 to 22 inches; fine sandy loam

BC2—22 to 37 inches; sandy loam

C1—37 to 60 inches; loamy sand

C2—60 to 80 inches; sand

#### **Minor Components**

##### **Carway**

*Composition:* About 25 percent

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are in rangeland or pasture, but some areas are in cropland. This mapunit is poorly suited for the most commonly grown crops. The hazard for wind and water erosion is slight. The depth to the water table can severely limit most engineering practices.

### **3926—Water**

#### **Map Unit Composition**

Water: 100 percent

### **3966—Willowbrook fine sandy loam, 0 to 1 percent slopes, occasionally flooded**

#### **Map Unit Composition**

Willowbrook: 90 percent

Minor components: 10 percent

#### **Component Descriptions**

##### **Willowbrook**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Flood plain on river valley

*Parent material:* Loamy alluvium over sandy alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Slowest permeability:* Moderately rapid (About 2.00 in/hr)

*Available water capacity:* Low (About 5.7 inches)

*Shrink—swell potential:* Low (About 1.7 LEP)

*Flooding hazard:* Occasional

*Ponding hazard:* None

*Depth to seasonal water saturation:* About 24 to 48 inches

*Runoff class:* Very low

*Ecological site:* Subirrigated (pe21—28)

*Land capability (irrigated):* 2e



*Land capability (nonirrigated): 3e*

*Typical Profile:*

Ap1—0 to 4 inches; fine sandy loam  
 Ap2—4 to 9 inches; fine sandy loam  
 AB—9 to 13 inches; fine sandy loam  
 Bw—13 to 17 inches; fine sandy loam  
 Bk1—17 to 19 inches; loam  
 Bk2—19 to 26 inches; fine sandy loam  
 2C1—26 to 45 inches; coarse sand  
 2C2—45 to 51 inches; coarse sand  
 2C3—51 to 80 inches; stratified gravelly coarse sand to sand

**Minor Components**

**Nickerson**

*Composition:* About 10 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Sandy (pe21—28)

**Kanza**

*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Subirrigated (pe21—28)

**Ninnescah**

*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are used for pasture or range, some areas are used for hay production. This map unit is poorly suited for most commonly grown crops. The hazard for water erosion is slight and wind erosion is severe. Depth to sand and water tables can limit most engineering uses for this map unit. Most areas are used for pasture or range, some areas are used for hay production. This map unit is poorly suited for most commonly grown crops. The hazard for water erosion is slight and wind erosion is severe. Depth to sand and water tables can limit most engineering uses for this map unit.

**4004—Yaggy fine sandy loam, 0 to 1 percent slopes**

**Map Unit Composition**

Yaggy: 95 percent  
 Minor components: 5 percent

**Component Descriptions**

**Yaggy**

*MLRA:* 79 — Great Bend Sand Plains  
*Landform:* Flood plain on river valley  
*Parent material:* Loamy alluvium over sandy alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Low (About 4.5 inches)  
*Shrink—swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* Occasional  
*Depth to seasonal water saturation:* About 24 to 48 inches  
*Runoff class:* Very low  
*Ecological site:* Sandy Lowland (pe21—28)  
*Land capability (irrigated):* 2e  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

Ap1—0 to 5 inches; fine sandy loam  
 Ap2—5 to 11 inches; fine sandy loam  
 2C1—11 to 14 inches; stratified very fine sandy loam to silt loam  
 3C2—14 to 24 inches; fine sand  
 3C3—24 to 31 inches; fine sand  
 3C4—31 to 42 inches; fine sand  
 3C5—42 to 53 inches; stratified gravelly coarse sand  
 3C6—53 to 69 inches; stratified gravelly coarse sand to sand  
 3C7—69 to 80 inches; stratified gravelly coarse sand to sand

**Minor Components**

**Imano**

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Subirrigated (pe21—28)

**Kanza**

*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Subirrigated (pe21—28)

**Ninnescah**

*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are used for pasture or range, some areas are used for hay production. This map unit is poorly suited for most commonly grown crops. The hazard for water erosion is slight and wind erosion is severe. Depth to sand and water tables can limit most engineering uses for this map unit. Most areas are used for



pasture or range, some areas are used for hay production. This map unit is poorly suited for most commonly grown crops. The hazard for water erosion is slight and wind erosion is severe. Depth to sand and water tables can limit most engineering uses for this map unit.

## **4005—Yaggy—Saxman complex, 0 to 2 percent slopes, occasionally flooded**

### **Map Unit Composition**

Yaggy: 60 percent  
Saxman: 30 percent  
Minor components: 10 percent

### **Component Descriptions**

#### **Yaggy**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Flood plain on river valley

*Parent material:* Loamy alluvium over sandy alluvium

*Slope:* 0 to 2 percent

*Drainage class:* Somewhat poorly drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* Low (About 4.5 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* Occasional

*Depth to seasonal water saturation:* About 24 to 48 inches

*Runoff class:* Very low

*Ecological site:* Sandy Lowland (pe21—28)

*Land capability (irrigated):* 2e

*Land capability (nonirrigated):* 3e

#### *Typical Profile:*

Ap1—0 to 5 inches; fine sandy loam  
Ap2—5 to 11 inches; fine sandy loam  
2C1—11 to 14 inches; stratified very fine sandy loam to silt loam  
3C2—14 to 24 inches; fine sand  
3C3—24 to 31 inches; fine sand  
3C4—31 to 42 inches; fine sand  
3C5—42 to 53 inches; stratified gravelly coarse sand  
3C6—53 to 69 inches; stratified gravelly coarse sand to sand  
3C7—69 to 80 inches; stratified gravelly coarse sand to sand

#### **Saxman**

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Flood plain on river valley

*Parent material:* Sandy alluvium

*Slope:* 0 to 2 percent

*Drainage class:* Moderately well drained

*Slowest permeability:* Rapid (About 5.95 in/hr)

*Available water capacity:* Low (About 4.4 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* Rare

*Depth to seasonal water saturation:* About 24 to 36 inches

*Runoff class:* Very low

*Ecological site:* Sandy Lowland (pe21—28)

*Land capability (irrigated):* 2e

*Land capability (nonirrigated):* 3e

#### *Typical Profile:*

Ap1—0 to 4 inches; loamy sand  
Ap2—4 to 8 inches; loamy sand  
A—8 to 13 inches; loamy sand  
AC—13 to 22 inches; loamy sand  
C1—22 to 30 inches; sand  
C2—30 to 37 inches; sand  
C3—37 to 48 inches; sand  
C4—48 to 54 inches; fine sand  
C5—54 to 80 inches; stratified gravelly coarse sand

### **Minor Components**

#### **Solvay**

*Composition:* About 10 percent

*Slope:* 0 to 2 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Subirrigated (pe21—28)

#### **Kanza**

*Slope:* 0 to 2 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21—28)

#### **Ninnescah**

*Slope:* 0 to 2 percent

*Drainage class:* Poorly drained

*Ecological site:* Subirrigated (pe21—28)

*General Considerations:* Most areas are used for pasture or range, some areas are used for hay production. This map unit is poorly suited for most commonly grown crops. The hazard for water erosion is slight and wind erosion is severe. Depth to sand and water tables can limit most engineering uses for this map unit.



## 4110—Zellmont And Poxmash sandy loams, 0 to 3 percent slopes

### Map Unit Composition

Zellmont: 70 percent  
Poxmash: 30 percent

### Component Descriptions

#### Zellmont

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Strath terrace on river valley

*Parent material:* Loamy alluvium over residuum weathered from permian shale

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* 20 to 39 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Slowest permeability:* Moderately slow (About 0.20 in/hr)

*Available water capacity:* Low (About 4.9 inches)

*Shrink—swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Sandy (pe21—28)

*Land capability (irrigated):*

*Land capability (nonirrigated):* 2e

#### Typical Profile:

Ap—0 to 8 inches; sandy loam  
Bt1—8 to 18 inches; sandy clay loam  
Bt2—18 to 26 inches; sandy clay loam  
2C—26 to 32 inches; loam  
Cr—32 to 80 inches; weathered bedrock

#### Poxmash

*MLRA:* 79 — Great Bend Sand Plains

*Landform:* Strath terrace on river valley

*Parent material:* Alluvium over residuum weathered from permian shale

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* 48 to 53 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Slowest permeability:* Moderately rapid (About 2.00 in/hr)

*Available water capacity:* Low (About 4.9 inches)

*Shrink—swell potential:* Low (About 1.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Sandy (pe21—28)

*Land capability (nonirrigated):* 3e

#### Typical Profile:

Ap—0 to 5 inches; sandy loam  
A—5 to 9 inches; sandy loam  
Bt1—9 to 15 inches; sandy loam  
Bt2—15 to 20 inches; loamy sand  
C1—20 to 33 inches; sand  
C2—33 to 48 inches; sand  
2Cr—48 to 80 inches; weathered bedrock

### Minor Components

#### Unnamed Wet Soils

*General Considerations:* Most areas are used as cropland, but some areas are in pasture or range. Some areas are also in the Conservation Reserve Program. This map unit is moderately well suited to all of the commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the main crops. The hazard of wind erosion is severe and the hazard of water erosion is moderate for these soils. Ephemeral gully erosion potential is moderate for these soils. Wind and water erosion can be controlled maintaining plant residue through the use of a conservation tillage system, strip cropping, field windbreaks, contour farming, tall grass barriers, terraces and grassed waterways. The moderate water holding capacity of these soils can limit production. This problem can be minimized by increasing organic matter, leaving plant residue, and conservation tillage. In some places, soil test results may show soil reaction (pH) in the strongly acid range. Additions of lime may be required for optimum nutrient balance. The moderately rapid permeability and relatively shallow depths to bedrock can limit some of the engineering uses of these soils.



Prime Farmland

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

A recent trend in land use in some parts of the survey area has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

The map units in the survey area that are considered prime farmland are listed in the following table. This list does not constitute a recommendation for a particular land use. On some soils included in the list, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures. The extent of each listed map unit is shown in the "Acres and Proportionate Extent of Soils" table. The location is shown on the detailed soil maps. The soil qualities that affect use and management are described in other tables in this document."



Map symbol	Mapunit name	Farmland Classification
1004	Albion sandy loam, 0 to 1 percent slopes	All areas are prime farmland
1011	Albion-shellabarger sandy loams, 1 to 3 percent slopes	All areas are prime farmland
1070	Avans loam, 0 to 1 percent slopes	All areas are prime farmland
1071	Avans loam, 1 to 3 percent slopes	All areas are prime farmland
1072	Avans loam, 3 to 7 percent slopes	All areas are prime farmland
1191	Blazefork silty clay loam, 0 to 1 percent slopes, rarely flooded	All areas are prime farmland
1192	Blazefork-kaskan complex, 0 to 1 percent slopes, rarely flooded	All areas are prime farmland
1359	Clark-ost loams, 3 to 7 percent slopes	All areas are prime farmland
1428	Crete silt loam, 0 to 1 percent slopes	All areas are prime farmland
1429	Crete silt loam, 1 to 3 percent slopes	All areas are prime farmland
1725	Farnum and funmar loams, 0 to 1 percent slopes	All areas are prime farmland
1727	Funmar-taver loams, 0 to 2 percent slopes	All areas are prime farmland
1804	Geary silt loam, 1 to 3 percent slopes	All areas are prime farmland
1985	Hayes fine sandy loam, 1 to 5 percent slopes	All areas are prime farmland
2390	Kaskan loam, 0 to 1 percent slopes, rarely flooded	All areas are prime farmland
2509	Ladysmith silty clay loam, 0 to 1 percent slopes	All areas are prime farmland
2587	Imano clay loam, 0 to 1 percent slopes, occasionally flooded	All areas are prime farmland
2948	Nalim loam, 0 to 1 percent slopes	All areas are prime farmland
2955	Nickerson fine sandy loam, 0 to 1 percent slopes	All areas are prime farmland
3051	Ost loam, 0 to 1 percent slope	All areas are prime farmland
3052	Ost-clark loams, 1 to 3 percent slopes	All areas are prime farmland
3170	Penalosa silt loam, 0 to 1 percent slopes	All areas are prime farmland
3171	Penalosa silt loam, 1 to 3 percent slopes	All areas are prime farmland
3469	Smolan silty clay loam, 1 to 3 percent slopes	All areas are prime farmland
3510	Saltcreek-funmar-farnum complex, 1 to 3 percent slopes	All areas are prime farmland
3511	Saltcreek and naron fine sandy loams, 0 to 1 percent slopes	All areas are prime farmland
3512	Saltcreek and naron fine sandy loams, 1 to 3 percent slopes	All areas are prime farmland
3533	Shellabarger sandy loam, 0 to 1 percent slopes	All areas are prime farmland
3534	Shellabarger sandy loam, 1 to 3 percent slopes	All areas are prime farmland
3535	Shellabarger-nalim complex, 1 to 3 percent slopes	All areas are prime farmland
3639	Taver loam, 0 to 1 percent slopes	All areas are prime farmland
3643	Tobin silt loam, 0 to 1 percent slopes, occasionally flooded	All areas are prime farmland



The "Soil Rating for Plant Growth, modified 1998" (SRPG) is a relative rating of the capacity of a soil to produce a specific plant under a defined management system. The index is determined from yield data on a few benchmark soils and is used to calculate yields, the net returns from crops, land assessment values, and taxes and to perform risk analysis when land management decisions are made. Specific information on plants and yields can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Map symbol	Soil name	Crop Index
1004	Albion Sandy Loam, 0 To 1 Percent Slopes-----	60
1011	Albion-Shellabarger Sandy Loams, 1 To 3 Percent Slopes-----	60
1057	Aquents, Frequently Ponded-----	2
1061	Arents, Earthen Dam-----	0
1062	Arents, Loamy-----	0
1070	Avans Loam, 0 To 1 Percent Slopes-----	65
1071	Avans Loam, 1 To 3 Percent Slopes-----	60
1072	Avans Loam, 3 To 7 Percent Slopes-----	57
1191	Blazefork Silty Clay Loam, 0 To 1 Percent Slopes, Rarely Flooded-----	55
1192	Blazefork-Kaskan Complex, 0 To 1 Percent Slopes, Rarely Flooded-----	60
1200	Buhler-Blazefork Silty Clay Loams, 0 To 1 Percent Slopes, Rarely Flooded-----	46
1324	Carway And Carbika Soils, 0 To 1 Percent Slopes-----	33
1357	Carway-Dillhut-Solvay Complex, 0 To 2 Percent Slopes-----	37
1359	Clark-Ost Loams, 3 To 7 Percent Slopes-----	33
1428	Crete Silt Loam, 0 To 1 Percent Slopes-----	70
1429	Crete Silt Loam, 1 To 3 Percent Slopes-----	69
1553	Darlow-Elmer Complex, 0 To 2 Percent Slopes-----	26
1554	Dillhut Fine Sand, 1 To 3 Percent Slopes-----	31
1555	Dillhut-Plev Complex, 0 To 2 Percent Slopes-----	30
1556	Dillhut-Solvay Complex, 0 To 3 Percent Slopes-----	41
1725	Farnum And Funmar Loams, 0 To 1 Percent Slopes-----	76
1727	Funmar-Taver Loams, 0 To 2 Percent Slopes-----	71
1804	Geary Silt Loam, 1 To 3 Percent Slopes-----	76
1807	Geary Silty Clay Loam, 3 To 7 Percent Slopes, Moderately Eroded-----	74
1985	Hayes Fine Sandy Loam, 1 To 5 Percent Slopes-----	57
1986	Hayes-Solvay Loamy Fine Sands, 0 To 5 Percent Slopes-----	52
1987	Hayes-Turon Complex, 0 To 5 Percent Slopes-----	54
2204	Jamash-Piedmont Clay Loams, 0 To 1 Percent Slopes-----	28
2205	Jamash-Piedmont Clay Loams, 1 To 3 Percent Slopes-----	24
2206	Jamash-Piedmont Clay Loams, 3 To 12 Percent Slopes-----	23
2207	Jamash Clay Loam, 0 To 8 Percent Slopes-----	15
2381	Kanza-Ninnescah Sandy Loams, 0 To 2 Percent Slopes, Commonly Flooded-----	35
2390	Kaskan Loam, 0 To 1 Percent Slopes, Rarely Flooded-----	73
2391	Kaskan Silty Clay Loam, 0 To 1 Percent Slopes, Frequently Flooded, Channeled-----	54
2395	Kisiwa Loam, 0 To 1 Percent Slopes-----	5
2509	Ladysmith Silty Clay Loam, 0 To 1 Percent Slopes-----	68
2556	Langdon Fine Sand, 0 To 15 Percent Slopes-----	26
2587	Imano Clay Loam, 0 To 1 Percent Slopes, Occasionally Flooded-----	45
2588	Longford Silty Clay Loam, 3 To 7 Percent Slopes, Moderately Eroded-----	72
2812	Mahone Loamy Fine Sand, 0 To 2 Percent Slopes, Rarely Flooded-----	47
2948	Nalim Loam, 0 To 1 Percent Slopes-----	77
2949	Naron Fine Sandy Loam, 3 To 7 Percent Slopes, Moderately Eroded-----	69
2950	Naron Fine Sandy Loam, 7 To 15 Percent Slopes, Moderately Eroded-----	63
2951	Nash Silt Loam, 1 To 3 Percent Slopes-----	38
2952	Nash-Lucien Silt Loams, 3 To 7 Percent Slopes-----	29
2953	Nash-Lucien Silt Loams, 7 To 15 Percent Slopes, Moderately Eroded-----	28
2955	Nickerson Fine Sandy Loam, 0 To 1 Percent Slopes-----	55
2956	Nickerson Loamy Fine Sand, 0 To 2 Percent Slopes-----	47
2957	Nickerson-Punkin Fine Sandy Loams, 0 To 2 Percent Slopes-----	50
2958	Ninnescah Fine Sandy Loam, 0 To 1 Percent Slopes, Occasionally Flooded-----	36
2959	Ninnescah Fine Sandy Loam, 0 To 1 Percent Slopes, Occasionally Flooded, Saline-----	31
3051	Ost Loam, 0 To 1 Percent Slopes-----	36
3052	Ost-Clark Loams, 1 To 3 Percent Slopes-----	34
3170	Penalosa Silt Loam, 0 To 1 Percent Slopes-----	75
3171	Penalosa Silt Loam, 1 To 3 Percent Slopes-----	75
3180	Pratt Fine Sand, 5 To 10 Percent Slopes-----	37
3181	Pratt-Turon Fine Sands, 1 To 5 Percent Slopes-----	43
3190	Punkin Silt Loam, 0 To 1 Percent Slopes-----	28
3191	Punkin-Taver Complex, 0 To 1 Percent Slopes-----	36
3403	Sand Pits-----	0
3469	Smolan Silty Clay Loam, 1 To 3 Percent Slopes-----	73
3510	Saltcreek-Funmar-Farnum Complex, 1 To 3 Percent Slopes-----	66
3511	Saltcreek And Naron Fine Sandy Loams, 0 To 1 Percent Slopes-----	60
3512	Saltcreek And Naron Fine Sandy Loams, 1 To 3 Percent Slopes-----	65
3520	Saxman Loamy Sand, 0 To 1 Percent Slopes-----	28
3530	Shellabarger, Eroded And Albion Soils, 7 To 15 Percent Slopes-----	51
3531	Shellabarger And Nalim Soils, 3 To 7 Percent Slopes-----	70
3532	Shellabarger Loamy Sand, 0 To 3 Percent Slopes-----	63
3533	Shellabarger Sandy Loam, 0 To 1 Percent Slopes-----	70
3534	Shellabarger Sandy Loam, 1 To 3 Percent Slopes-----	66
3535	Shellabarger-Nalim Complex, 1 To 3 Percent Slopes-----	71
3540	Solvay Loamy Fine Sand, 0 To 2 Percent Slopes-----	66
3550	Spelvin Loamy Sand, 0 To 1 Percent Slopes-----	55
3639	Taver Loam, 0 To 1 Percent Slopes-----	66
3640	Tivin Fine Sand, 10 To 30 Percent Slopes-----	17
3641	Tivin-Dillhut Fine Sands, 0 To 15 Percent Slopes-----	33
3642	Tivin-Willowbrook, Occasionally Flooded, Complex, 0 To 12 Percent Slopes-----	27
3643	Tobin Silt Loam, 0 To 1 Percent Slopes, Occasionally Flooded-----	76
3644	Turon-Carway Complex, 0 To 5 Percent Slopes-----	40



The "Soil Rating for Plant Growth, modified 1998" (SRPG) is a relative rating of the capacity of a soil to produce a specific plant under a defined management system. The index is determined from yield data on a few benchmark soils and is used to calculate yields, the net returns from crops, land assessment values, and taxes and to perform risk analysis when land management decisions are made. Specific information on plants and yields can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Map symbol	Soil name	Crop Index
3760	Urban Land-Blazefork-Kaskan Complex, 0 To 1 Percent Slopes, Protected----	32
3762	Urban Land-Darlow-Elmer Complex, 0 To 1 Percent Slopes-----	14
3763	Urban Land-Imano Complex, 0 To 1 Percent Slopes, Protected-----	24
3764	Urban Land-Mahone Complex, 0 To 1 Percent Slopes, Protected-----	19
3765	Urban Land-Saltcreek-Naron Complex, 0 To 1 Percent Slopes-----	30
3766	Urban Land-Saxman Complex, 0 To 1 Percent Slopes, Protected-----	14
3767	Urban Land-Willowbrook Complex, 0 To 1 Percent Slopes, Protected-----	24
3768	Urban Land-Yaggy Complex, 0 To 1 Percent Slopes, Protected-----	18
3900	Warnut Fine Sandy Loam, 0 To 1 Percent Slopes-----	15
3926	Water-----	0
3966	Willowbrook Fine Sandy Loam, 0 To 1 Percent Slopes, Occasionally Flooded-----	44
4004	Yaggy Fine Sandy Loam, 0 To 1 Percent Slopes-----	33
4005	Yaggy-Saxman Complex, 0 To 2 Percent Slopes, Occasionally Flooded-----	33
4110	Zellmont And Poxmash Sandy Loams, 0 To 3 Percent Slopes-----	45
990	Abbyville Loam, 0 To 1 Percent Slopes-----	31
991	Abbyville-Kisiwa Complex, 0 To 2 Percent Slopes, Flooded-----	19



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(Entries under "Erosion factors--T" apply to the entire profile. Entries under "K", "Kf", "Wind Erodibility Group" and "Wind Erodibility Index" apply only to the surface layer)

Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro- logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
1004:ALBION----	90	N/A	3e	All areas are prime farmland	B	Sandy (pe21-28)	6G	.20	.24	4	3	86
1011:ALBION----	70	N/A	3e	All areas are prime farmland	B	Sandy (pe21-28)	6G	.20	.24	4	3	86
1011:SHELLABARGE R-----	30	N/A	2e	All areas are prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
1057:AQUENTS----	100	N/A	5w	Not prime farmland	D	Subirrigated (pe21-28)	2	.37	.37	5	3	86
1061:ARENTS, EARTHEN DAM----	100	N/A	8	Not prime farmland		Unspecified		---	---	-	---	---
1062:ARENTS, LANDFILL-----	100	N/A	N/A	Not prime farmland		Unspecified		---	---	-	---	---
1070:AVANS-----	100	N/A	1	All areas are prime farmland	B	Loamy Upland (pe21-28)	3	.37	.37	5	5	56
1071:AVANS-----	85	N/A	1	All areas are prime farmland	B	Loamy Upland (pe21-28)	3	.37	.37	5	5	56
1072:AVANS-----	85	N/A	2e	All areas are prime farmland	B	Loamy Upland (pe21-28)	3	.37	.37	5	5	56
1191:BLAZEFORK--	90	2s-	2w	All areas are prime farmland	D	Clay Lowland (pe25-34)	4	.37	.37	5	7	38
1192:BLAZEFORK--	60	2s-	2s	All areas are prime farmland	D	Clay Lowland (pe25-34)	4	.37	.37	5	7	38
1192:KASKAN-----	40	N/A	2w	All areas are prime farmland	B	Loamy Lowland (pe21-28)	1	.28	.28	4	6	48
1200:BUHLER-----	65	2w-	2w	Not prime farmland	D	Saline Subirrigated (pe21-28)	9W	.43	.43	2	7	38
1200:BLAZEFORK--	30	2s-	2s	Not prime farmland	D	Clay Lowland (pe25-34)	4	.37	.37	5	7	38
1324:CARWAY-----	50	N/A	2w	Not prime farmland	D	Subirrigated (pe21-28)	2	.20	.20	5	3	86
1324:CARBIKA----	30	N/A	2w	Not prime farmland	D	Subirrigated (pe21-28)	2	.24	.24	5	5	56
1357:CARWAY-----	40	N/A	2w	Not prime farmland	D	Subirrigated (pe21-28)	2	.17	.17	5	2	134
1357:SOLVAY-----	30	N/A	2e	Not prime farmland	D	Subirrigated (pe21-28)	5	.17	.17	5	3	86



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Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro- logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
1357:DILLHUT----	30	3e-	3e	Not prime farmland	B	Sands (pe21-28)	7	.15	.15	4	1	220
1359:CLARK-----	70	N/A	2c	All areas are prime farmland	B	Limy Upland (pe21-28)	3	.28	.28	5	4L	86
1359:OST-----	30	N/A	2c	All areas are prime farmland	B	Loamy Upland (pe24-32)	8	.28	.28	5	6	48
1428:CRETE-----	100	2s-	2s	All areas are prime farmland	C	Clay Upland (pe25-34)	4C	.37	.37	5	6	48
1429:CRETE-----	100	2e-	2e	All areas are prime farmland	C	Clay Upland (pe25-34)	4C	.37	.37	5	6	48
1553:DARLOW-----	70	4s-	4s	Not prime farmland	C	Clay Pan (pe21- 28)	8	.43	.43	2	5	56
1553:ELMER-----	20	3s-	3s	Not prime farmland	C	Loamy Terrace (pe21-28)	8	.32	.32	2	3	86
1554:DILLHUT----	70	3e-	3e	Not prime farmland	B	Sands (pe21-28)	7	.15	.15	4	1	220
1555:DILLHUT----	35	3e-	3e	Not prime farmland	B	Sands (pe21-28)	7	.15	.15	5	1	220
1555:PLEV-----	35	N/A	5w	Not prime farmland	B	Subirrigated (pe21-28)	2	.17	.17	5	2	134
1556:DILLHUT----	30	3e-	3e	Not prime farmland	B	Sands (pe21-28)	7	.15	.15	5	1	220
1556:SOLVAY-----	30	N/A	2e	Not prime farmland	D	Subirrigated (pe21-28)	5	.20	.20	5	3	86
1725:FUNMAR-----	40	1-	2c	All areas are prime farmland	C	Loamy Upland (pe21-28)	3	.28	.28	5	6	56
1725:FARNUM-----	40	1-	2c	All areas are prime farmland	B	Loamy Upland (pe21-28)	4	.28	.28	5	6	56
1727:FUNMAR-----	55	1-	2c	All areas are prime farmland	C	Loamy Upland (pe21-28)	3	.28	.28	5	5	56
1727:TAVER-----	45	N/A	2s	All areas are prime farmland	D	Clay Upland (pe21-28)	3	.28	.28	5	6	48
1804:GEARY-----	100	2e-	2e	All areas are prime farmland	B	Loamy Upland (pe21-28)	4	.32	.32	5	6	48
1807:GEARY-----	100	3e-	3e	Not prime farmland	B	Loamy Upland (pe25-34)	4	.37	.37	5	7	38



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Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro- logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
1985:HAYES-----	60	3e-	3e	All areas are prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
1986:HAYES-----	55	3e-	3e	Not prime farmland	B	Sandy (pe21-28)	5	.17	.17	5	2	134
1986:SOLVAY-----	20	N/A	2e	Not prime farmland	D	Subirrigated (pe21-28)	5	.17	.17	5	2	134
1987:HAYES-----	40	3e-	3e	Not prime farmland	B	Sandy (pe21-28)	5	.17	.17	5	2	134
1987:TURON-----	35	3e-	3e	Not prime farmland	A	Sands (pe21-28)	7	.15	.15	5	1	220
2204:JAMASH-----	50	N/A	4e	Not prime farmland	D	Shallow Prairie (pe24-32)	6	.37	.37	2	7	38
2204:PIEDMONT---	50	N/A	2e	Not prime farmland	D	Clay Upland (pe24-32)	4	.37	.37	3	7	38
2205:JAMASH-----	60	N/A	4e	Not prime farmland	D	Shallow Prairie (pe24-32)	6	.37	.37	2	7	38
2205:PIEDMONT---	40	N/A	3e	Not prime farmland	D	Clay Upland (pe24-32)	4	.37	.37	3	7	38
2206:JAMASH-----	60	N/A	6e	Not prime farmland	D	Shallow Prairie (pe24-32)	6	.37	.37	2	7	38
2206:PIEDMONT---	40	N/A	4e	Not prime farmland	D	Clay Upland (pe24-32)	4	.37	.37	3	7	38
2207:JAMASH-----	80	N/A	6e	Not prime farmland	D	Shallow Prairie (pe24-32)	6	.37	.37	2	7	38
2381:KANZA-----	50	N/A	5w	Not prime farmland	D	Subirrigated (pe21-28)	2	.20	.20	5	3	86
2381:NINNESCAH--	50	N/A	5w	Not prime farmland	B	Subirrigated (pe21-28)	9W	.20	.20	5	3	86
2390:KASKAN-----	85	N/A	2w	All areas are prime farmland	B	Loamy Lowland (pe21-28)	1	.28	.28	4	6	48
2391:KASKAN-----	75	N/A	5w	Not prime farmland	B	Loamy Lowland (pe21-28)	1	.37	.37	5	7	38
2395:KISIWA-----	90	N/A	4s	Not prime farmland	D	Saline Subirrigated (pe21-28)	9W	.43	.43	2	6	48
2509:LADYSMITH--	100	N/A	2s	All areas are prime farmland	D	Clay Upland (pe25-34)	4	.37	.37	5	7	38
2556:LANGDON----	50	N/A	6e	Not prime farmland	A	Choppy Sands (pe21-28)	7	.15	.15	5	1	220



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Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro- logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
2587:IMANO-----	85	N/A	3w	All areas are prime farmland	C	Subirrigated (pe21-28)	9	.28	.28	4	4L	86
2588:LONGFORD---	90	N/A	4e	Not prime farmland	C	Loamy Upland (pe25-34)	3	.37	.37	5	7	38
2812:MAHONE-----	95	N/A	2w	Not prime farmland	C	Loamy Lowland (pe21-28)	1	.17	.17	5	2	134
2948:NALIM-----	80	2e-	2e	All areas are prime farmland	B	Loamy Upland (pe24-32)	3	.28	.28	5	5	56
2949:NARON-----	85	3e-	3e	Not prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
2950:NARON-----	85	3e-	3e	Not prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
2951:NASH-----	90	N/A	3e	Not prime farmland	B	Loamy Upland (pe24-32)	4	.37	.37	3	5	56
2952:NASH-----	60	N/A	4e	Not prime farmland	B	Loamy Upland (pe24-32)	4	.37	.37	3	5	56
2952:LUCIEN-----	30	N/A	6e	Not prime farmland	C	Shallow Prairie (pe24-32)	4	.37	.37	2	4L	86
2953:NASH-----	70	N/A	4e	Not prime farmland	B	Loamy Upland (pe24-32)	4	.37	.37	3	5	56
2953:LUCIEN-----	20	N/A	6e	Not prime farmland	C	Shallow Prairie (pe24-32)	4	.37	.37	2	4L	86
2955:NICKERSON--	100	3e-	3e	All areas are prime farmland	B	Sandy (pe21-28)	5	.17	.17	4	3	86
2956:NICKERSON--	85	3e-	3e	Not prime farmland	B	Sandy (pe21-28)	5	.15	.15	4	2	134
2957:NICKERSON--	50	3e-	3e	Not prime farmland	B	Sandy (pe21-28)	5	.17	.17	4	3	86
2957:PUNKIN-----	50	3s-	3s	Not prime farmland	D	Saline Subirrigated (pe21-28)	9	.32	.32	2	3	86
2958:NINNESCAH--	85	N/A	5w	Not prime farmland	B	Subirrigated (pe21-28)	9W	.20	.20	5	3	86
2959:NINNESCAH--	100	N/A	5s	Not prime farmland	B	Saline Subirrigated (pe21-28)	9	.28	.28	5	3	86
3051:OST-----	90	N/A	2c	All areas are prime farmland	B	Loamy Upland (pe24-32)	8	.28	.28	5	6	48



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Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro- logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
3052:OST-----	55	N/A	2c	All areas are prime farmland	B	Loamy Upland (pe24-32)	8	.28	.28	5	6	48
3052:CLARK-----	45	N/A	2c	All areas are prime farmland	B	Limy Upland (pe21-28)	3	.28	.28	5	4L	86
3170:PENALOSA---	100	1-	2c	All areas are prime farmland	C	Loamy Upland (pe21-28)	4	.37	.37	5	6	48
3171:PENALOSA---	100	1-	2c	All areas are prime farmland	C	Loamy Upland (pe21-28)	4	.37	.37	5	6	48
3180:PRATT-----	85	3e-	3e	Not prime farmland	A	Sands (pe21-28)	7	.15	.15	5	1	220
3181:PRATT-----	45	3e-	3e	Not prime farmland	A	Sands (pe21-28)	7	.15	.15	5	1	220
3181:TURON-----	30	3e-	3e	Not prime farmland	A	Sands (pe21-28)	7	.15	.15	5	1	220
3190:PUNKIN-----	90	3s-	3s	Not prime farmland	D	Clay Pan (pe21- 28)	9W	.43	.43	2	5	56
3191:PUNKIN-----	70	3s-	3s	Not prime farmland	D	Clay Pan (pe21- 28)	9W	.43	.43	2	5	56
3191:TAVER-----	20	N/A	2s	Not prime farmland	D	Clay Upland (pe21-28)	3	.28	.28	5	6	48
3403:SAND PIT---	100	N/A	N/A	Not prime farmland		Unspecified		---	---	-	---	---
3469:SMOLAN-----	90	2e-	2e	All areas are prime farmland	C	Loamy Upland (pe25-34)	4	.37	.37	5	7	38
3510:SALTCREEK--	50	1-	3e	All areas are prime farmland	C	Sandy (pe21-28)	5	.20	.20	5	3	86
3510:FUNMAR-----	30	1-	2c	All areas are prime farmland	C	Loamy Upland (pe21-28)	3	.28	.28	5	6	56
3510:FARNUM-----	20	1-	2c	All areas are prime farmland	B	Loamy Upland (pe21-28)	4	.28	.28	5	6	56
3511:SALTCREEK--	70	1-	3e	All areas are prime farmland	C	Sandy (pe21-28)	5	.20	.20	5	3	86
3511:NARON-----	30	2e-	2e	All areas are prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86



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Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro- logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
3512:SALTCREEK--	50	1-	3e	All areas are prime farmland	C	Sandy (pe21-28)	5	.20	.20	5	3	86
3512:NARON-----	50	3e-	3e	All areas are prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
3520:SAXMAN-----	85	2e-	3e	Not prime farmland	A	Sandy Lowland (pe21-28)	1	.20	.20	5	2	134
3530:SHELLABARGE R-----	45	N/A	2e	Not prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
3530:ALBION-----	40	N/A	3e	Not prime farmland	B	Sandy (pe21-28)	6G	.20	.24	4	3	86
3531:SHELLABARGE R-----	50	N/A	2e	Not prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
3531:NALIM-----	50	2e-	2e	Not prime farmland	B	Loamy Upland (pe24-32)	3	.28	.28	5	5	86
3532:SHELLABARGE R-----	80	N/A	2e	Not prime farmland	B	Sandy (pe21-28)	5	.17	.17	5	2	134
3533:SHELLABARGE R-----	85	N/A	2e	All areas are prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
3534:SHELLABARGE R-----	85	N/A	2e	All areas are prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
3535:SHELLABARGE R-----	55	N/A	2e	All areas are prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
3535:NALIM-----	45	2e-	2e	All areas are prime farmland	B	Loamy Upland (pe24-32)	3	.28	.28	5	5	86
3540:SOLVAY-----	90	N/A	2e	Not prime farmland	D	Subirrigated (pe21-28)	5	.17	.17	5	3	86
3550:SPELVIN----	100	N/A	2e	Not prime farmland	B	Sandy (pe21-28)	5	.15	.15	5	2	134
3639:TAVER-----	90	N/A	2s	All areas are prime farmland	D	Clay Upland (pe21-28)	3	.28	.28	5	6	48
3640:TIVIN-----	95	N/A	6e	Not prime farmland	A	Choppy Sands (pe21-28)	7	.15	.15	5	1	220
3641:TIVIN-----	45	N/A	6e	Not prime farmland	A	Choppy Sands (pe21-28)	7	.15	.15	5	1	220
3641:DILLHUT----	40	3e-	3e	Not prime farmland	B	Sands (pe21-28)	7	.15	.15	5	1	220



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Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro- logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
3642:TIVIN-----	70	N/A	6e	Not prime farmland	A	Choppy Sands (pe21-28)	7	.15	.15	5	1	220
3642:WILLOWBROOK	30	2e-	3e	Not prime farmland	B	Subirrigated (pe21-28)	1	.20	.20	4	3	86
3643:TOBIN-----	100	N/A	2w	All areas are prime farmland	B	Loamy Lowland (pe25-34)	1	.32	.32	5	6	48
3644:TURON-----	65	3e-	3e	Not prime farmland	A	Sands (pe21-28)	7	.15	.15	5	1	220
3644:CARWAY-----	20	N/A	2w	Not prime farmland	D	Subirrigated (pe21-28)	2	.17	.17	5	2	134
3760:URBAN LAND-	50	N/A	N/A	Not prime farmland	D	Unspecified		---	---	-	---	---
3760:BLAZEFOK---	25	2s-	2s	Not prime farmland	D	Clay Lowland (pe25-34)	4	.37	.37	5	7	38
3760:KASKAN-----	25	N/A	2w	Not prime farmland	B	Loamy Lowland (pe21-28)	1	.28	.28	4	6	48
3762:URBAN LAND-	50	N/A	N/A	Not prime farmland	D	Unspecified		---	---	-	---	---
3762:DARLOW-----	25	4s-	4s	Not prime farmland	C	Clay Pan (pe21- 28)	8	.43	.43	2	5	56
3762:ELMER-----	15	3s-	3s	Not prime farmland	C	Loamy Terrace (pe21-28)	8	.32	.32	2	3	86
3763:URBAN LAND-	50	N/A	N/A	Not prime farmland	D	Unspecified		---	---	-	---	---
3763:IMANO-----	40	N/A	3w	Not prime farmland	C	Subirrigated (pe21-28)	9	.28	.28	4	4L	86
3764:URBAN LAND-	60	N/A	N/A	Not prime farmland	D	Unspecified		---	---	-	---	---
3764:MAHONE-----	35	N/A	2w	Not prime farmland	C	Loamy Lowland (pe21-28)	1	.17	.17	5	2	134
3765:URBAN LAND-	50	N/A	N/A	Not prime farmland	D	Unspecified		---	---	-	---	---
3765:SALTCREEK---	35	1-	3e	Not prime farmland	C	Sandy (pe21-28)	5	.20	.20	5	3	86
3765:NARON-----	15	2e-	2e	Not prime farmland	B	Sandy (pe21-28)	5	.20	.20	5	3	86
3766:URBAN LAND-	50	N/A	N/A	Not prime farmland	D	Unspecified		---	---	-	---	---
3766:SAXMAN-----	45	2e-	3e	Not prime farmland	A	Sandy Lowland (pe21-28)	1	.20	.20	5	2	134



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Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro- logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
3767:URBAN LAND-	50	N/A	N/A	Not prime farmland	D	Unspecified		---	---	-	---	---
3767:WILLOWBROOK	45	2e-	3e	Not prime farmland	B	Subirrigated (pe21-28)	1	.20	.20	4	3	86
3768:URBAN LAND-	50	N/A	N/A	Not prime farmland	D	Unspecified		---	---	-	---	---
3768:YAGGY-----	45	2e-	3e	Not prime farmland	C	Sandy Lowland (pe21-28)	1	.20	.20	3	3	86
3900:WARNUT-----	75	N/A	2w	Not prime farmland	D	Subirrigated (pe21-28)	2	.20	.20	5	3	86
3926:WATER-----	100	N/A	N/A			Unspecified		---	---	-	---	---
3966:WILLOWBROOK	90	2e-	3e	Not prime farmland	B	Subirrigated (pe21-28)	1	.20	.20	4	3	86
4004:YAGGY-----	95	2e-	3e	Not prime farmland	C	Sandy Lowland (pe21-28)	1	.20	.20	3	3	86
4005:YAGGY-----	60	2e-	3e	Not prime farmland	C	Sandy Lowland (pe21-28)	1	.20	.20	3	3	86
4005:SAXMAN-----	30	2e-	3e	Not prime farmland	A	Sandy Lowland (pe21-28)	1	.20	.20	5	2	134
4110:ZELLMONT---	70	N/A	2e	Not prime farmland	B	Sandy (pe21-28)	6	.20	.20	3	3	86
4110:POXMASH----	30	N/A	3e	Not prime farmland	B	Sandy (pe21-28)	6	.20	.20	4	3	86
990:ABBYVILLE---	95	3s-	3s	Not prime farmland	C	Saline Subirrigated (pe21-28)	5	.43	.43	2	6	48
991:ABBYVILLE---	45	3s-	3s	Not prime farmland	C	Saline Subirrigated (pe21-28)	5	.32	.32	2	3	86
991:KISIWA-----	40	N/A	4s	Not prime farmland	D	Saline Subirrigated (pe21-28)	9W	.43	.43	2	6	48







RANGELAND PRODUCTIVITY  
Reno County, Kansas

### Use and Explanation of Rangeland, Grazed Forest Land, Native Pastureland Interpretations

Information in this subsection can be used to plan the use and management of soils for rangeland, grazed forest land, and native pasture. Different kinds of soils vary in their capacity to produce native grasses and other plants suitable for grazing. Information in this subsection provides groupings of similar soils and estimates of potential forage production, which can be used to determine livestock stocking rates.

**Rangeland.** Range is land on which the native vegetation (climax or natural potential plant community) is predominantly grasses, grasslike plants, forbs, and shrubs suitable for grazing and browsing. Range includes natural grasslands, savannas, many wetlands, some deserts, tundra, and certain shrub and forb communities. Rangeland receives no regular or frequent cultural treatment. The composition and production of the plant community are determined by soil, climate, topography, overstory canopy, and grazing management.

**Grazed Forest Land.** Includes land on which the understory includes, as an integral part of the forest plant community, plants that can be grazed without significantly impairing other forest values.

**Native Pasture.** Includes land on which the native vegetation (climax or natural potential plant community) is forest but which is used and managed primarily for production of native plants for forage. Native pasture includes cut-over forest land and forest land cleared and now managed for native or naturalized forage plants.

#### Rangeland

In areas that have similar climate and topography, differences in the kind and amount of vegetation produced on rangeland are closely related to the kind of soil. Effective management based on the relationship between the soils and vegetation and water.

The Rangeland, Grazed Forest land, Native Pastureland Interpretations shows, for each soil that supports rangeland vegetation, the ecological site and the potential annual production of vegetation in favorable, normal, unfavorable years. An explanation of the column headings in this table follows.

An ecological site is the product of all the environmental factors responsible for its development. It has characteristic soils that have developed over time throughout the soil development process; a characteristic hydrology, particularly infiltration and runoff, that has developed over time; and a characteristic plant community (kind and amount of vegetation). The hydrology of a site is influenced by development of the soil and plant community. The vegetation, soils, and hydrology are all interrelated. Each is influenced by the others and influences the development of the others. The plant community on an ecological site is typified by an association of species that differs from that of other ecological sites in the kind and/or proportion of species or in total production. Descriptions of ecological sites are provided in the Field Office Technical Guide, which is available in local offices of the Natural Resources Conservation Service.

Total dry-weight production is the amount of vegetation that can be expected to grow annually on well managed rangeland that is supporting the potential natural plant community. It includes all vegetation, whether or not it is palatable to grazing animals. It includes the current year's growth of leaves, twigs, and fruits of woody plants. It does not include the increase in stem diameter of trees and shrubs. It is expressed in pounds per acre of air-dry vegetation for favorable, average, and unfavorable years. In a favorable year, the amount and distribution of precipitation and the temperatures make growing conditions substantially better than average. In a normal year, growing conditions are about average. In an unfavorable year, growing conditions are well below average, generally because of low available soil moisture. Yields are adjusted to a common percent of air-dry moisture content.

Range management requires a knowledge of the kinds of soil and of the potential natural plant community. It also requires an evaluation of the present range similarity index and rangeland trend. Range similarity index is determined by comparing the present plant community with the potential natural plant community on a particular rangeland ecological site. The more closely the existing community resembles the potential community, the higher the range similarity index. Rangeland trend is defined as the direction of change in an existing plant community relative to the potential natural plant community. Further information about the range similarity index and rangeland trend is available in chapter 4 of the National Range and Pasture Handbook, which is available in local offices of the Natural Resources Conservation Service. The objective in range management is to control grazing so that the plants growing on a site are about the same in kind and amount as the potential natural plant community for that site. Such management generally results in the optimum production of vegetation, control of undesirable brush species, conservation of water, and control of erosion. Sometimes, however, an area with a range similarity index somewhat below the potential meets grazing needs, provides wildlife habitat, and protects soil and water resources.



RANGELAND PRODUCTIVITY--Continued  
Reno County, Kansas

(Only the soils that support rangeland vegetation suitable for grazing are rated.) Refer to range site description to determine the percentage allowable of grasses, forbs, and shrubs for the range ecological site.

Map symbol and soil name	Ecological site	Total dry-weight production		
		Favorable year	Average year	Unfavorable year
		Lb/acre	Lb/acre	Lb/acre
990: Abbyville-----	Saline Subirrigated (pe21-28)	7,000	6,000	5,000
991: Abbyville, rarely flooded-----	Saline Subirrigated (pe21-28)	7,000	6,000	5,000
Kisiwa, occasionally flooded-----	Saline Subirrigated (pe21-28)	7,000	6,000	5,000
1004: Albion-----	Sandy (pe21-28)	4,000	3,000	2,000
1011: Albion-----	Sandy (pe21-28)	4,000	3,000	2,000
Shellabarger-----	Sandy (pe21-28)	4,000	3,000	2,000
1057: Aguents-----	Subirrigated (pe21-28)	9,000	8,000	7,000
1061: Arents, Earthen Dam-----	---	---	---	---
1062: Arents, Landfill-----	---	---	---	---
1070: Avans-----	Loamy Upland (pe21-28)	5,500	4,000	2,500
1071: Avans-----	Loamy Upland (pe21-28)	5,500	4,000	2,500
1072: Avans-----	Loamy Upland (pe21-28)	5,500	4,000	2,500
1191: Blazefork-----	Clay Lowland (pe25-34)	6,500	5,000	4,000
1192: Blazefork-----	Clay Lowland (pe25-34)	6,500	5,000	4,000
Kaskan-----	Loamy Lowland (pe21-28)	7,000	5,500	4,500
1200: Buhler-----	Saline Subirrigated (pe21-28)	3,500	2,500	1,800
Blazefork-----	Clay Lowland (pe25-34)	6,500	5,000	4,000
1324: Carway-----	Subirrigated (pe21-28)	9,500	8,500	7,500
Carbika-----	Subirrigated (pe21-28)	9,500	8,500	7,500
1357: Carway-----	Subirrigated (pe21-28)	9,500	8,500	7,500
Dillhut-----	Sands (pe21-28)	4,500	3,500	2,500
Solvay-----	Subirrigated (pe21-28)	9,500	8,500	7,500
1359: Clark-----	Limy Upland (pe21-28)	4,500	3,500	3,000
Ost-----	Loamy Upland (pe24-32)	5,500	4,000	2,500
1428: Crete-----	Clay Upland (pe25-34)	5,000	3,500	2,500
1429: Crete-----	Clay Upland (pe25-34)	5,000	3,500	2,500
1553: Darlow-----	Clay Pan (pe21-28)	3,500	2,500	1,800
Elmer-----	Loamy Terrace (pe21-28)	5,500	5,000	3,400
1554: Dillhut-----	Sands (pe21-28)	4,500	3,500	2,500
1555: Dillhut-----	Sands (pe21-28)	4,500	3,500	2,500
Plev-----	Subirrigated (pe21-28)	9,500	8,500	7,500
1556: Dillhut-----	Sands (pe21-28)	4,500	3,500	2,500
Solvay-----	Subirrigated (pe21-28)	9,500	8,500	7,500
1725: Farnum-----	Loamy Upland (pe21-28)	5,500	4,000	2,500
Funmar-----	Loamy Upland (pe21-28)	5,500	4,000	2,500
1727: Funmar-----	Loamy Upland (pe21-28)	5,500	4,000	2,500
Taver-----	Clay Upland (pe21-28)	5,000	3,500	2,500
1804: Geary-----	Loamy Upland (pe21-28)	5,500	4,000	2,500
1807: Geary, Moderately Eroded-----	Loamy Upland (pe25-34)	5,500	4,000	2,500
1985: Hayes-----	Sandy (pe21-28)	4,000	3,000	2,000
1986: Hayes-----	Sandy (pe21-28)	4,000	3,000	2,000
Solvay-----	Subirrigated (pe21-28)	9,500	8,500	7,500
1987: Hayes-----	Sandy (pe21-28)	4,000	3,000	2,000
Turon-----	Sands (pe21-28)	4,500	3,500	2,500
2204: Jamash-----	Shallow Prairie (pe24-32)	3,200	2,400	1,700
Piedmont-----	Clay Upland (pe24-32)	5,000	3,500	2,500
2205: Jamash-----	Shallow Prairie (pe24-32)	3,200	2,400	1,700
Piedmont-----	Clay Upland (pe24-32)	5,000	3,500	2,500
2206: Jamash-----	Shallow Prairie (pe24-32)	3,200	2,400	1,700
Piedmont-----	Clay Upland (pe24-32)	5,000	3,500	2,500
2207: Jamash-----	Shallow Prairie (pe24-32)	3,200	2,400	1,700
2381:				



RANGELAND PRODUCTIVITY--Continued  
Reno County, Kansas

(Only the soils that support rangeland vegetation suitable for grazing are rated.) Refer to range site description to determine the percentage allowable of grasses, forbs, and shrubs for the range ecological site.

Map symbol and soil name	Ecological site	Total dry-weight production		
		Favorable year	Average year	Unfavorable year
		Lb/acre	Lb/acre	Lb/acre
Kanza-----	Subirrigated (pe21-28)	9,500	8,500	7,500
Ninnescah-----	Subirrigated (pe21-28)	9,500	8,500	7,500
2390:				
Kaskan-----	Loamy Lowland (pe21-28)	7,000	5,500	4,500
2391:				
Kaskan-----	Loamy Lowland (pe21-28)	7,000	5,500	4,500
2395:				
Kisiwa-----	Saline Subirrigated (pe21-28)	7,000	6,000	5,000
2509:				
Ladysmith-----	Clay Upland (pe25-34)	5,000	3,500	2,500
2556:				
Langdon-----	Choppy Sands (pe21-28)	3,000	2,150	1,550
2587:				
Imano-----	Subirrigated (pe21-28)	9,500	8,500	7,500
2588:				
Longford, Moderately Eroded-----	Loamy Upland (pe25-34)	5,000	3,500	2,500
2812:				
Mahone-----	Loamy Lowland (pe21-28)	7,000	5,500	4,500
2948:				
Nalim-----	Loamy Upland (pe24-32)	5,500	4,000	2,500
2949:				
Naron, Moderately Eroded-----	Sandy (pe21-28)	4,500	3,000	2,000
2950:				
Naron, Moderately Eroded-----	Sandy (pe21-28)	4,000	3,000	2,000
2951:				
Nash-----	Loamy Upland (pe24-32)	5,500	4,000	2,500
2952:				
Nash-----	Loamy Upland (pe24-32)	5,500	4,000	2,500
Lucien-----	Shallow Prairie (pe24-32)	3,200	2,400	1,700
2953:				
Nash, Moderately Eroded-----	Loamy Upland (pe24-32)	5,500	4,000	2,500
Lucien-----	Shallow Prairie (pe24-32)	3,200	2,400	1,700
2955:				
Nickerson-----	Sandy (pe21-28)	4,000	3,000	2,000
2956:				
Nickerson-----	Sandy (pe21-28)	4,000	3,000	2,000
2957:				
Nickerson-----	Sandy (pe21-28)	4,000	3,000	2,000
Punkin-----	Saline Subirrigated (pe21-28)	3,500	2,500	1,800
2958:				
Ninnescah-----	Subirrigated (pe21-28)	9,500	8,500	7,500
2959:				
Ninnescah, saline-----	Saline Subirrigated (pe21-28)	7,000	6,000	5,000
3051:				
Ost-----	Loamy Upland (pe24-32)	5,500	4,000	2,500
3052:				
Ost-----	Loamy Upland (pe24-32)	5,500	4,000	2,500
Clark-----	Limy Upland (pe21-28)	4,500	3,500	3,000
3170:				
Penalosa-----	Loamy Upland (pe21-28)	5,500	4,000	2,500
3171:				
Penalosa-----	Loamy Upland (pe21-28)	5,500	4,000	2,500
3180:				
Pratt-----	Sands (pe21-28)	4,500	3,500	2,500
3181:				
Pratt-----	Sands (pe21-28)	4,500	3,500	2,500
Turon-----	Sands (pe21-28)	4,500	3,500	2,500
3190:				
Punkin-----	Clay Pan (pe21-28)	3,500	2,500	1,800
3191:				
Punkin-----	Clay Pan (pe21-28)	3,500	2,500	1,800
Taver-----	Clay Upland (pe21-28)	5,000	3,500	2,500
3403:				
Sand Pit-----	---	---	---	---
3469:				
Smolan-----	Loamy Upland (pe25-34)	5,500	4,000	2,500
3510:				
Saltcreek-----	Sandy (pe21-28)	4,000	3,000	2,000
Funmar-----	Loamy Upland (pe21-28)	5,500	4,000	2,500
Farnum-----	Loamy Upland (pe21-28)	5,500	4,000	2,500
3511:				
Saltcreek-----	Sandy (pe21-28)	4,000	3,000	2,000
Naron, sandy substratum-----	Sandy (pe21-28)	4,000	3,000	2,000
3512:				
Saltcreek-----	Sandy (pe21-28)	4,000	3,000	2,000
Naron-----	Sandy (pe21-28)	4,000	3,000	2,000
3520:				
Saxman-----	Sandy Lowland (pe21-28)	6,000	4,750	3,500
3530:				
Shellabarger, Eroded-----	Sandy (pe21-28)	4,000	3,000	2,000
Albion-----	Sandy (pe21-28)	4,000	3,000	2,000
3531:				
Shellabarger, Moderately Eroded---	Sandy (pe21-28)	4,000	3,000	2,000
Nalim-----	Loamy Upland (pe24-32)	5,500	4,000	2,500
3532:				



RANGELAND PRODUCTIVITY--Continued  
Reno County, Kansas

(Only the soils that support rangeland vegetation suitable for grazing are rated.) Refer to range site description to determine the percentage allowable of grasses, forbs, and shrubs for the range ecological site.

Map symbol and soil name	Ecological site	Total dry-weight production		
		Favorable year	Average year	Unfavorable year
		Lb/acre	Lb/acre	Lb/acre
Shellabarger-----	Sandy (pe21-28)	4,000	3,000	2,000
3533:				
Shellabarger-----	Sandy (pe21-28)	4,000	3,000	2,000
3534:				
Shellabarger-----	Sandy (pe21-28)	4,000	3,000	2,000
3535:				
Shellabarger-----	Sandy (pe21-28)	4,000	3,000	2,000
Nalim-----	Loamy Upland (pe24-32)	5,500	4,000	2,500
3540:				
Solvay-----	Subirrigated (pe21-28)	9,500	8,500	7,500
3550:				
Spelvin-----	Sandy (pe21-28)	4,000	3,000	2,000
3639:				
Taver-----	Clay Upland (pe21-28)	5,000	3,500	2,500
3640:				
Tivin-----	Choppy Sands (pe21-28)	3,000	2,150	1,550
3641:				
Tivin-----	Choppy Sands (pe21-28)	3,000	2,150	1,550
Dillhut-----	Sands (pe21-28)	4,500	3,500	2,500
3642:				
Tivin-----	Choppy Sands (pe21-28)	3,000	2,150	1,550
Willowbrook, occasionally flooded-	Subirrigated (pe21-28)	9,500	8,500	7,500
3643:				
Tobin-----	Loamy Lowland (pe25-34)	7,000	5,500	4,500
3644:				
Turon-----	Sands (pe21-28)	4,500	3,500	2,500
Carway-----	Subirrigated (pe21-28)	9,500	8,500	7,500
3760:				
Urban Land, Protected-----	---	---	---	---
Blazefork, Protected-----	Clay Lowland (pe25-34)	6,500	5,000	4,000
Kaskan, Protected-----	Loamy Lowland (pe21-28)	7,000	5,500	4,500
3762:				
Urban Land-----	---	---	---	---
Darlow-----	Clay Pan (pe21-28)	3,500	2,500	1,800
Elmer-----	Loamy Terrace (pe21-28)	5,500	5,000	3,400
3763:				
Urban Land, Protected-----	---	---	---	---
Imano, Protected-----	Subirrigated (pe21-28)	9,500	8,500	7,500
3764:				
Urban Land, Protected-----	---	---	---	---
Mahone, Protected-----	Loamy Lowland (pe21-28)	7,000	5,500	4,500
3765:				
Urban Land-----	---	---	---	---
Saltcreek-----	Sandy (pe21-28)	4,000	3,000	2,000
Naron-----	Sandy (pe21-28)	4,000	3,000	2,000
3766:				
Urban Land, Protected-----	---	---	---	---
Saxman, Protected-----	Sandy Lowland (pe21-28)	6,000	4,750	3,500
3767:				
Urban Land, Protected-----	---	---	---	---
Willowbrook, Protected-----	Subirrigated (pe21-28)	9,500	8,500	7,500
3768:				
Urban Land, Protected-----	---	---	---	---
Yaggy, Protected-----	Sandy Lowland (pe21-28)	6,000	4,750	3,500
3900:				
Warnut-----	Subirrigated (pe21-28)	9,500	8,500	7,500
3926:				
Water-----	---	---	---	---
3966:				
Willowbrook-----	Subirrigated (pe21-28)	9,500	8,500	7,500
4004:				
Yaggy-----	Sandy Lowland (pe21-28)	6,000	4,750	3,500
4005:				
Yaggy-----	Sandy Lowland (pe21-28)	6,000	4,750	3,500
Saxman-----	Sandy Lowland (pe21-28)	6,000	4,750	3,500
4110:				
Zellmont-----	Sandy (pe21-28)	4,000	3,000	2,000
Poxmash-----	Sandy (pe21-28)	4,000	3,000	2,000



BUILDING SITE DEVELOPMENT  
Reno County, Kansas

### Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. The following tables show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.



BUILDING SITE DEVELOPMENT--Continued  
Reno County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
990: Abbyville-----	95	Somewhat limited Shrink-swell	0.50	Somewhat limited Depth to saturated zone Shrink-swell	0.95 0.50	Somewhat limited Shrink-swell	0.50
991: Abbyville, rarely flooded-----	45	Very limited  Flooding Shrink-swell	 1.00 0.50	Very limited  Flooding Depth to saturated zone Shrink-swell	 1.00 0.95 0.50	Very limited  Flooding Shrink-swell	 1.00 0.50
Kisiwa, occasionally flooded-----	40	Very limited  Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 0.50	Very limited  Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 0.50	Very limited  Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 0.50
1004: Albion-----	90	Not limited		Not limited		Not limited	
1011: Albion-----	70	Not limited		Not limited		Not limited	
Shellabarger-----	30	Not limited		Not limited		Not limited	
1057: Aguents-----	100	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
1061: Arents, Earthen Dam-	100	Not rated		Not rated		Not rated	
1062: Arents, Landfill----	100	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
1070: Avans-----	100	Somewhat limited Shrink-swell	0.50	Not limited		Somewhat limited Shrink-swell	0.50
1071: Avans-----	85	Somewhat limited Shrink-swell	0.50	Not limited		Somewhat limited Shrink-swell	0.50
1072: Avans-----	85	Somewhat limited Shrink-swell	0.50	Not limited		Somewhat limited Shrink-swell Slope	0.50 0.12
1191: Blazefork-----	90	Very limited Flooding Shrink-swell	1.00 1.00	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 0.61 0.50	Very limited Flooding Shrink-swell	1.00 1.00
1192: Blazefork-----	60	Very limited Flooding Shrink-swell	1.00 1.00	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 0.61 0.50	Very limited Flooding Shrink-swell	1.00 1.00
Kaskan-----	40	Very limited Flooding	1.00	Very limited Flooding Depth to saturated zone	1.00 0.16	Very limited Flooding	1.00
1200: Buhler-----	65	Very limited Flooding Shrink-swell	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 0.16	Very limited Flooding Shrink-swell	1.00 1.00
Blazefork-----	30	Very limited Flooding Shrink-swell	1.00 1.00	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 0.61 0.50	Very limited Flooding Shrink-swell	1.00 1.00



BUILDING SITE DEVELOPMENT--Continued  
Reno County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1324: Carway-----	50	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Carbika-----	30	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
1357: Carway-----	40	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Dillhut-----	30	Somewhat limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Solvay-----	30	Not limited		Somewhat limited Depth to saturated zone	0.95	Not limited	
1359: Clark-----	70	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell Slope	0.50 0.00
Ost-----	30	Not limited		Not limited		Somewhat limited Slope	0.12
1428: Crete-----	100	Very limited Shrink-swell	1.00	Very limited Shrink-swell	1.00	Very limited Shrink-swell	1.00
1429: Crete-----	100	Very limited Shrink-swell	1.00	Very limited Shrink-swell	1.00	Very limited Shrink-swell	1.00
1553: Darlow-----	70	Not limited		Not limited		Not limited	
Elmer-----	20	Not limited		Not limited		Not limited	
1554: Dillhut-----	70	Somewhat limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
1555: Dillhut-----	35	Not limited		Not limited		Not limited	
Plev-----	35	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
1556: Dillhut-----	30	Not limited		Not limited		Not limited	
Solvay-----	30	Not limited		Somewhat limited Depth to saturated zone	0.95	Not limited	
1725: Farnum-----	40	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
Funmar-----	40	Not limited		Somewhat limited Shrink-swell	0.50	Not limited	
1727: Funmar-----	55	Not limited		Somewhat limited Shrink-swell	0.50	Not limited	
Taver-----	45	Very limited Shrink-swell	1.00	Very limited Shrink-swell	1.00	Very limited Shrink-swell	1.00
1804: Geary-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
1807: Geary, Moderately Eroded-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell Slope	0.50 0.12
1985: Hayes-----	60	Not limited		Very limited Shrink-swell	1.00	Not limited	
1986: Hayes-----	55	Not limited		Very limited Shrink-swell	1.00	Not limited	
Solvay-----	20	Not limited		Somewhat limited Depth to saturated zone	0.95	Not limited	



BUILDING SITE DEVELOPMENT--Continued  
Reno County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1987: Hayes-----	40	Not limited		Very limited Shrink-swell	1.00	Not limited	
Turon-----	35	Not limited		Not limited		Not limited	
2204: Jamash-----	50	Very limited Depth to soft bedrock	1.00	Very limited Shrink-swell	1.00	Very limited Depth to soft bedrock	1.00
		Shrink-swell	1.00	Depth to soft bedrock	1.00	Shrink-swell	1.00
Piedmont-----	50	Very limited Shrink-swell	1.00	Very limited Shrink-swell Depth to soft bedrock	1.00 0.29	Very limited Shrink-swell	1.00
2205: Jamash-----	60	Very limited Depth to soft bedrock	1.00	Very limited Shrink-swell	1.00	Very limited Depth to soft bedrock	1.00
		Shrink-swell	1.00	Depth to soft bedrock	1.00	Shrink-swell	1.00
Piedmont-----	40	Very limited Shrink-swell	1.00	Very limited Shrink-swell Depth to soft bedrock	1.00 0.29	Very limited Shrink-swell	1.00
2206: Jamash-----	60	Very limited Depth to soft bedrock	1.00	Very limited Shrink-swell	1.00	Very limited Depth to soft bedrock	1.00
		Shrink-swell	1.00	Depth to soft bedrock	1.00	Shrink-swell	1.00
Piedmont-----	40	Very limited Shrink-swell	1.00	Very limited Shrink-swell Depth to soft bedrock	1.00 0.29	Slope Very limited Shrink-swell Slope	0.48 1.00 0.48
2207: Jamash-----	80	Very limited Depth to soft bedrock	1.00	Very limited Shrink-swell	1.00	Very limited Depth to soft bedrock	1.00
		Shrink-swell	1.00	Depth to soft bedrock	1.00	Shrink-swell	1.00
						Slope	0.12
2381: Kanza-----	50	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Ninnescah-----	50	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
		Depth to saturated zone	0.44	Depth to saturated zone	1.00	Depth to saturated zone	0.44
2390: Kaskan-----	85	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
				Depth to saturated zone	0.16		
2391: Kaskan-----	75	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
				Depth to saturated zone	0.16		
2395: Kisiwa-----	90	Very limited Ponding	1.00	Very limited Ponding	1.00	Very limited Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
2509: Ladysmith-----	100	Very limited Shrink-swell	1.00	Very limited Depth to saturated zone	1.00	Very limited Shrink-swell	1.00
				Shrink-swell	0.50		
2556: Langdon-----	50	Somewhat limited Slope	0.00	Somewhat limited Slope	0.00	Very limited Slope	1.00



BUILDING SITE DEVELOPMENT--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2587: Imano-----	85	Very limited Flooding Shrink-swell	1.00 0.50	Very limited Flooding Depth to saturated zone	1.00 0.95	Very limited Flooding Shrink-swell	1.00 0.50
2588: Longford, Moderately Eroded-----	90	Very limited  Shrink-swell	 1.00	Very limited  Shrink-swell	 1.00	Very limited  Shrink-swell Slope	 1.00 0.00
2812: Mahone-----	95	Very limited Flooding	1.00	Very limited Flooding Depth to saturated zone	1.00 0.16	Very limited Flooding	1.00
2948: Nalim-----	80	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
2949: Naron, Moderately Eroded-----	85	Not limited		Not limited		Somewhat limited  Slope	 0.00
2950: Naron, Moderately Eroded-----	85	Somewhat limited  Slope	 0.16	Somewhat limited  Slope	 0.16	Very limited  Slope	 1.00
2951: Nash-----	90	Not limited		Somewhat limited Depth to soft bedrock	0.64	Not limited	
2952: Nash-----	60	Not limited		Somewhat limited Depth to soft bedrock	0.64	Somewhat limited Slope	0.12
Lucien-----	30	Somewhat limited Depth to soft bedrock	1.00	Very limited Depth to soft bedrock	1.00	Somewhat limited Depth to soft bedrock Slope	1.00 0.48
2953: Nash, Moderately Eroded-----	70	Somewhat limited  Slope	 0.37	Somewhat limited  Depth to soft bedrock Slope	 0.64 0.37	Very limited  Slope	 1.00
Lucien-----	20	Somewhat limited Depth to soft bedrock Slope	1.00 0.63	Very limited Depth to soft bedrock Slope	1.00 0.63	Very limited Depth to soft bedrock Slope	1.00 1.00
2955: Nickerson-----	100	Not limited		Somewhat limited Depth to saturated zone	0.95	Not limited	
2956: Nickerson-----	85	Not limited		Somewhat limited Depth to saturated zone	0.95	Not limited	
2957: Nickerson-----	50	Not limited		Somewhat limited Depth to saturated zone	0.95	Not limited	
Punkin-----	50	Very limited Shrink-swell	1.00	Not limited		Very limited Shrink-swell	1.00
2958: Ninnescah-----	85	Very limited Flooding Depth to saturated zone	1.00 0.44	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 0.44
2959: Ninnescah, saline---	100	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
3051: Ost-----	90	Not limited		Not limited		Not limited	
3052: Ost-----	55	Not limited		Not limited		Not limited	
Clark-----	45	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50



BUILDING SITE DEVELOPMENT--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3170: Penalosa-----	100	Somewhat limited Shrink-swell	0.50	Very limited Shrink-swell	1.00	Somewhat limited Shrink-swell	0.50
3171: Penalosa-----	100	Somewhat limited Shrink-swell	0.50	Very limited Shrink-swell	1.00	Somewhat limited Shrink-swell	0.50
3180: Pratt-----	85	Not limited		Not limited		Somewhat limited Slope	0.86
3181: Pratt-----	45	Not limited		Not limited		Not limited	
Turon-----	30	Not limited		Not limited		Not limited	
3190: Punkin-----	90	Very limited Shrink-swell	1.00	Very limited Shrink-swell	1.00	Very limited Shrink-swell	1.00
3191: Punkin-----	70	Very limited Shrink-swell	1.00	Very limited Shrink-swell	1.00	Very limited Shrink-swell	1.00
Taver-----	20	Very limited Shrink-swell	1.00	Very limited Shrink-swell	1.00	Very limited Shrink-swell	1.00
3403: Sand Pit-----	100	Not rated		Not rated		Not rated	
3469: Smolan-----	90	Very limited Shrink-swell	1.00	Somewhat limited Shrink-swell	0.50	Very limited Shrink-swell	1.00
3510: Saltcreek-----	50	Not limited		Very limited Shrink-swell	1.00	Not limited	
Funmar-----	30	Not limited		Somewhat limited Shrink-swell	0.50	Not limited	
Farnum-----	20	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
3511: Saltcreek-----	70	Not limited		Very limited Shrink-swell	1.00	Not limited	
Naron, sandy substratum-----	30	Not limited		Not limited		Not limited	
3512: Saltcreek-----	50	Not limited		Very limited Shrink-swell	1.00	Not limited	
Naron-----	50	Not limited		Not limited		Not limited	
3520: Saxman-----	85	Very limited Flooding	1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding	1.00
3530: Shellabarger, Eroded	45	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
Albion-----	40	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
3531: Shellabarger, Moderately Eroded--	50	Not limited		Not limited		Somewhat limited	
Nalim-----	50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Slope Somewhat limited Shrink-swell Slope	0.00 0.50 0.00
3532: Shellabarger-----	80	Not limited		Not limited		Not limited	
3533: Shellabarger-----	85	Not limited		Not limited		Not limited	
3534: Shellabarger-----	85	Not limited		Not limited		Not limited	
3535: Shellabarger-----	55	Not limited		Not limited		Not limited	
Nalim-----	45	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
3540: Solvay-----	90	Not limited		Somewhat limited Depth to saturated zone	0.95	Not limited	
3550: Spelvin-----	100	Not limited		Not limited		Not limited	
3639: Taver-----	90	Very limited Shrink-swell	1.00	Very limited Shrink-swell	1.00	Very limited Shrink-swell	1.00



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Reno County, Kansas

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Map symbol and soil name	Pct of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3640: Tivin-----	95	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
3641: Tivin-----	45	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
Dillhut-----	40	Not limited		Not limited		Not limited	
3642: Tivin-----	70	Not limited		Somewhat limited Depth to saturated zone	0.03	Somewhat limited Slope	0.48
Willowbrook, occasionally flooded-----	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding Depth to saturated zone	1.00 0.95	Flooding	1.00
3643: Tobin-----	100	Very limited Flooding Shrink-swell	1.00 0.50	Very limited Flooding Shrink-swell	1.00 0.50	Very limited Flooding Shrink-swell	1.00 0.50
3644: Turon-----	65	Not limited		Not limited		Somewhat limited Slope	0.00
Carway-----	20	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
3760: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Blazefork, Protected	25	Very limited Shrink-swell	1.00	Somewhat limited Depth to saturated zone Shrink-swell	0.61 0.50	Very limited Shrink-swell	1.00
Kaskan, Protected---	25	Not limited		Somewhat limited Depth to saturated zone	0.16	Not limited	
3762: Urban Land-----	50	Not rated		Not rated		Not rated	
Darlow-----	25	Not limited		Not limited		Not limited	
Elmer-----	15	Not limited		Not limited		Not limited	
3763: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Imano, Protected----	40	Somewhat limited Shrink-swell	0.50	Somewhat limited Depth to saturated zone	0.95	Somewhat limited Shrink-swell	0.50
3764: Urban Land, Protected-----	60	Not rated		Not rated		Not rated	
Mahone, Protected---	35	Not limited		Somewhat limited Depth to saturated zone	0.16	Not limited	
3765: Urban Land-----	50	Not rated		Not rated		Not rated	
Saltcreek-----	35	Not limited		Very limited Shrink-swell	1.00	Not limited	
Naron-----	15	Not limited		Not limited		Not limited	
3766: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Saxman, Protected---	45	Not limited		Very limited Depth to saturated zone	1.00	Not limited	



BUILDING SITE DEVELOPMENT--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3767: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Willowbrook, Protected-----	45	Not limited		Somewhat limited Depth to saturated zone	0.95	Not limited	
3768: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Yaggy, Protected----	45	Not limited		Somewhat limited Depth to saturated zone	0.95	Not limited	
3900: Warnut-----	75	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
3926: Water-----	100	Not rated		Not rated		Not rated	
3966: Willowbrook-----	90	Very limited Flooding	1.00	Very limited Flooding Depth to saturated zone	1.00 0.95	Very limited Flooding	1.00
4004: Yaggy-----	95	Very limited Flooding	1.00	Very limited Flooding Depth to saturated zone	1.00 0.95	Very limited Flooding	1.00
4005: Yaggy-----	60	Very limited Flooding	1.00	Very limited Flooding Depth to saturated zone	1.00 0.95	Very limited Flooding	1.00
Saxman-----	30	Very limited Flooding	1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding	1.00
4110: Zellmont-----	70	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell Depth to soft bedrock	0.50 0.29	Somewhat limited Shrink-swell	0.50
Poxmash-----	30	Not limited		Not limited		Not limited	



BUILDING SITE DEVELOPMENT--Continued  
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Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
990: Abbyville-----	95	Very limited Low strength	1.00	Somewhat limited Depth to saturated zone	0.95	Very limited Sodium content	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10		
991: Abbyville, rarely flooded-----	45	Very limited Low strength	1.00	Somewhat limited Depth to saturated zone	0.95	Very limited Sodium content	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Flooding	0.40				
Kisiwa, occasionally flooded-----	40	Very limited Ponding	1.00	Very limited Ponding	1.00	Very limited Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Sodium content	1.00
		Flooding	1.00	Cutbanks cave	1.00	Depth to saturated zone	1.00
		Low strength	1.00	Flooding	0.60	Flooding	0.60
		Shrink-swell	0.50	Too clayey	0.08		
1004: Albion-----	90	Not limited		Very limited Cutbanks cave	1.00	Not limited	
1011: Albion-----	70	Not limited		Very limited Cutbanks cave	1.00	Not limited	
Shellabarger-----	30	Not limited		Very limited Cutbanks cave	1.00	Not limited	
1057: Aquents-----	100	Very limited Ponding	1.00	Very limited Ponding	1.00	Very limited Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
				Cutbanks cave	1.00	Droughty	0.71
1061: Arents, Earthen Dam-	100	Not rated		Not rated		Not rated	
1062: Arents, Landfill----	100	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
1070: Avans-----	100	Very limited Low strength	1.00	Somewhat limited Cutbanks cave	0.10	Not limited	
		Shrink-swell	0.50				
1071: Avans-----	85	Very limited Low strength	1.00	Somewhat limited Cutbanks cave	0.10	Not limited	
		Shrink-swell	0.50				
1072: Avans-----	85	Very limited Low strength	1.00	Somewhat limited Cutbanks cave	0.10	Not limited	
		Shrink-swell	0.50				
1191: Blazefork-----	90	Very limited Low strength	1.00	Somewhat limited Depth to saturated zone	0.61	Not limited	
		Shrink-swell	1.00	Too clayey	0.12		
		Flooding	0.40	Cutbanks cave	0.10		
1192: Blazefork-----	60	Very limited Low strength	1.00	Somewhat limited Depth to saturated zone	0.61	Not limited	
		Shrink-swell	1.00	Too clayey	0.12		
		Flooding	0.40	Cutbanks cave	0.10		
Kaskan-----	40	Somewhat limited Flooding	0.40	Very limited Cutbanks cave	1.00	Not limited	
				Depth to saturated zone	0.16		



BUILDING SITE DEVELOPMENT--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1200: Buhler-----	65	Very limited Low strength	1.00	Somewhat limited Depth to saturated zone	0.16	Very limited Sodium content	1.00
		Shrink-swell	1.00	Cutbanks cave	0.10	Salinity	0.13
		Flooding	0.40	Too clayey	0.00		
Blazefork-----	30	Very limited Low strength	1.00	Somewhat limited Depth to saturated zone	0.61	Not limited	
		Shrink-swell	1.00	Too clayey	0.12		
		Flooding	0.40	Cutbanks cave	0.10		
1324: Carway-----	50	Very limited Ponding	1.00	Very limited Ponding	1.00	Very limited Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
				Cutbanks cave	0.10		
Carbika-----	30	Very limited Ponding	1.00	Very limited Ponding	1.00	Very limited Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
				Cutbanks cave	0.10		
				Too clayey	0.00		
1357: Carway-----	40	Very limited Ponding	1.00	Very limited Ponding	1.00	Very limited Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
				Cutbanks cave	0.10		
Dillhut-----	30	Somewhat limited Depth to saturated zone	0.75	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.75
				Cutbanks cave	1.00	Droughty	0.31
Solvay-----	30	Not limited		Very limited Cutbanks cave	1.00	Not limited	
				Depth to saturated zone	0.95		
1359: Clark-----	70	Somewhat limited Low strength	0.78	Somewhat limited Cutbanks cave	0.10	Not limited	
		Shrink-swell	0.50				
Ost-----	30	Somewhat limited Low strength	0.78	Somewhat limited Cutbanks cave	0.10	Not limited	
1428: Crete-----	100	Very limited Low strength	1.00	Somewhat limited Too clayey	0.12	Not limited	
		Shrink-swell	1.00	Cutbanks cave	0.10		
1429: Crete-----	100	Very limited Low strength	1.00	Somewhat limited Too clayey	0.12	Not limited	
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
1553: Darlow-----	70	Very limited Low strength	1.00	Somewhat limited Cutbanks cave	0.10	Very limited Sodium content	1.00
Elmer-----	20	Not limited		Somewhat limited Cutbanks cave	0.10	Very limited Sodium content	1.00
1554: Dillhut-----	70	Somewhat limited Depth to saturated zone	0.75	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.75
				Cutbanks cave	1.00	Droughty	0.31
1555: Dillhut-----	35	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.15
Plev-----	35	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
				Cutbanks cave	1.00	Droughty	0.92
1556: Dillhut-----	30	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.15
Solvay-----	30	Not limited		Very limited Cutbanks cave	1.00	Not limited	
				Depth to saturated zone	0.95		



BUILDING SITE DEVELOPMENT--Continued  
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Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1725: Farnum-----	40	Very limited Low strength Shrink-swell	1.00 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
Funmar-----	40	Very limited Low strength	1.00	Somewhat limited Cutbanks cave	0.10	Not limited	
1727: Funmar-----	55	Very limited Low strength	1.00	Somewhat limited Cutbanks cave	0.10	Not limited	
Taver-----	45	Very limited Low strength Shrink-swell	1.00 1.00	Somewhat limited Cutbanks cave	0.10	Not limited	
1804: Geary-----	100	Very limited Frost action Low strength Shrink-swell	1.00 1.00 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
1807: Geary, Moderately Eroded-----	100	Very limited  Frost action Low strength Shrink-swell	 1.00 1.00 0.50	Somewhat limited  Cutbanks cave	 0.10	Not limited	
1985: Hayes-----	60	Not limited		Somewhat limited Cutbanks cave Too clayey	0.10 0.02	Not limited	
1986: Hayes-----	55	Not limited		Somewhat limited Cutbanks cave Too clayey	0.10 0.02	Not limited	
Solvay-----	20	Not limited		Very limited Cutbanks cave Depth to saturated zone	1.00 0.95	Not limited	
1987: Hayes-----	40	Not limited		Somewhat limited Cutbanks cave Too clayey	0.10 0.02	Not limited	
Turon-----	35	Not limited		Very limited Cutbanks cave Too clayey	1.00 0.01	Not limited	
2204: Jamash-----	50	Very limited Depth to soft bedrock Low strength	1.00 1.00	Very limited Depth to soft bedrock Depth to dense layer	1.00 0.50	Very limited Depth to bedrock Droughty	1.00 0.86
Piedmont-----	50	Shrink-swell Very limited Shrink-swell Low strength	1.00 1.00 1.00	Cutbanks cave Somewhat limited Too clayey Depth to dense layer Depth to soft bedrock Cutbanks cave	0.10 0.88 0.50 0.29 0.10	Somewhat limited Depth to bedrock	0.29
2205: Jamash-----	60	Very limited Depth to soft bedrock Low strength	1.00 1.00	Very limited Depth to soft bedrock Depth to dense layer	1.00 0.50	Very limited Depth to bedrock Droughty	1.00 0.86
Piedmont-----	40	Shrink-swell Very limited Shrink-swell Low strength	1.00 1.00 1.00	Cutbanks cave Somewhat limited Too clayey Depth to dense layer Depth to soft bedrock Cutbanks cave	0.10 0.88 0.50 0.29 0.10	Somewhat limited Depth to bedrock	0.29



BUILDING SITE DEVELOPMENT--Continued  
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Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2206: Jamash-----	60	Very limited Depth to soft bedrock Low strength	1.00 1.00	Very limited Depth to soft bedrock Depth to dense layer	1.00 0.50	Very limited Depth to bedrock Droughty	1.00 0.86
Piedmont-----	40	Shrink-swell Very limited Shrink-swell Low strength	1.00 1.00 1.00	Cutbanks cave Somewhat limited Too clayey Depth to dense layer Depth to soft bedrock Cutbanks cave	0.10 0.88 0.50 0.29 0.10	Somewhat limited Depth to bedrock	0.29
2207: Jamash-----	80	Very limited Depth to soft bedrock Low strength Shrink-swell	1.00 1.00 1.00	Very limited Depth to soft bedrock Depth to dense layer Cutbanks cave	1.00 0.50 0.10	Very limited Depth to bedrock Droughty	1.00 0.86
2381: Kanza-----	50	Very limited Flooding Depth to saturated zone	1.00 0.75	Very limited Cutbanks cave Depth to saturated zone Flooding	1.00 1.00 0.80	Very limited Flooding Depth to saturated zone Droughty	1.00 0.75 0.00
Ninnescah-----	50	Very limited Flooding Depth to saturated zone	1.00 0.19	Very limited Depth to saturated zone Cutbanks cave Flooding	1.00 1.00 0.60	Somewhat limited Flooding Depth to saturated zone	0.60 0.19
2390: Kaskan-----	85	Somewhat limited Flooding	0.40	Very limited Cutbanks cave Depth to saturated zone	1.00 0.16	Not limited	
2391: Kaskan-----	75	Very limited Flooding	1.00	Very limited Cutbanks cave Flooding Depth to saturated zone	1.00 0.80 0.16	Very limited Flooding	1.00
2395: Kisiwa-----	90	Very limited Ponding Depth to saturated zone Low strength Shrink-swell	1.00 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Cutbanks cave Too clayey	1.00 1.00 1.00 0.08	Very limited Ponding Sodium content Depth to saturated zone	1.00 1.00 1.00
2509: Ladysmith-----	100	Very limited Low strength Shrink-swell Frost action	1.00 1.00 0.50	Very limited Depth to saturated zone Too clayey Cutbanks cave	1.00 0.50 0.10	Not limited	
2556: Langdon-----	50	Somewhat limited Slope	0.00	Very limited Cutbanks cave Slope	1.00 0.00	Somewhat limited Droughty Slope	0.97 0.00
2587: Imano-----	85	Very limited Flooding Low strength Shrink-swell	1.00 1.00 0.50	Very limited Cutbanks cave Depth to saturated zone Flooding	1.00 0.95 0.60	Somewhat limited Flooding	0.60
2588: Longford, Moderately Eroded-----	90	Very limited Low strength Shrink-swell Frost action	1.00 1.00 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	



BUILDING SITE DEVELOPMENT--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2812: Mahone-----	95	Somewhat limited Flooding	0.40	Somewhat limited Depth to saturated zone Cutbanks cave	0.16 0.10	Not limited	
2948: Nalim-----	80	Very limited Low strength Shrink-swell	1.00 0.50	Very limited Cutbanks cave	1.00	Not limited	
2949: Naron, Moderately Eroded-----	85	Not limited		Very limited Cutbanks cave	1.00	Not limited	
2950: Naron, Moderately Eroded-----	85	Somewhat limited Slope	0.16	Very limited Cutbanks cave Slope	1.00 0.16	Somewhat limited Slope	0.16
2951: Nash-----	90	Not limited		Somewhat limited Depth to soft bedrock Cutbanks cave	0.64 0.10	Somewhat limited Depth to bedrock	0.65
2952: Nash-----	60	Not limited		Somewhat limited Depth to soft bedrock Cutbanks cave	0.64 0.10	Somewhat limited Depth to bedrock	0.65
Lucien-----	30	Somewhat limited Depth to soft bedrock	1.00	Very limited Depth to soft bedrock Cutbanks cave	1.00 0.10	Very limited Depth to bedrock Droughty	1.00 0.96
2953: Nash, Moderately Eroded-----	70	Somewhat limited Slope	0.37	Somewhat limited Depth to soft bedrock Slope Cutbanks cave	0.64 0.37 0.10	Somewhat limited Depth to bedrock Slope	0.65 0.37
Lucien-----	20	Somewhat limited Depth to soft bedrock Slope	1.00 0.63	Very limited Depth to soft bedrock Slope Cutbanks cave	1.00 0.63 0.10	Very limited Depth to bedrock Droughty Slope	1.00 0.96 0.63
2955: Nickerson-----	100	Not limited		Very limited Cutbanks cave Depth to saturated zone	1.00 0.95	Not limited	
2956: Nickerson-----	85	Not limited		Very limited Cutbanks cave Depth to saturated zone	1.00 0.95	Not limited	
2957: Nickerson-----	50	Not limited		Very limited Cutbanks cave Depth to saturated zone	1.00 0.95	Not limited	
Punkin-----	50	Very limited Low strength Shrink-swell	1.00 1.00	Very limited Cutbanks cave Too clayey	1.00 0.04	Very limited Sodium content	1.00
2958: Ninnescah-----	85	Very limited Flooding Depth to saturated zone	1.00 0.19	Very limited Depth to saturated zone Cutbanks cave Flooding	1.00 1.00 0.60	Somewhat limited Flooding Depth to saturated zone	0.60 0.19
2959: Ninnescah, saline---	100	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Cutbanks cave Flooding	1.00 1.00 0.60	Very limited Depth to saturated zone Flooding Salinity	1.00 0.60 0.50



BUILDING SITE DEVELOPMENT--Continued  
Reno County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3051: Ost-----	90	Somewhat limited Low strength	0.78	Somewhat limited Cutbanks cave	0.10	Not limited	
3052: Ost-----	55	Somewhat limited Low strength	0.78	Somewhat limited Cutbanks cave	0.10	Not limited	
Clark-----	45	Somewhat limited Low strength Shrink-swell	0.78 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
3170: Penalosa-----	100	Very limited Low strength Shrink-swell	1.00 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
3171: Penalosa-----	100	Very limited Low strength Shrink-swell	1.00 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
3180: Pratt-----	85	Not limited		Very limited Cutbanks cave	1.00	Not limited	
3181: Pratt-----	45	Not limited		Very limited Cutbanks cave	1.00	Not limited	
Turon-----	30	Not limited		Very limited Cutbanks cave Too clayey	1.00 0.01	Not limited	
3190: Punkin-----	90	Very limited Low strength Shrink-swell	1.00 1.00	Somewhat limited Too clayey Cutbanks cave	0.11 0.10	Very limited Sodium content	1.00
3191: Punkin-----	70	Very limited Low strength Shrink-swell	1.00 1.00	Somewhat limited Too clayey Cutbanks cave	0.11 0.10	Very limited Sodium content	1.00
Taver-----	20	Very limited Low strength Shrink-swell	1.00 1.00	Somewhat limited Cutbanks cave	0.10	Not limited	
3403: Sand Pit-----	100	Not rated		Not rated		Not rated	
3469: Smolan-----	90	Very limited Low strength Shrink-swell Frost action	1.00 1.00 0.50	Somewhat limited Cutbanks cave Too clayey	0.10 0.03	Not limited	
3510: Saltcreek-----	50	Not limited		Somewhat limited Cutbanks cave Too clayey	0.10 0.00	Not limited	
Funmar-----	30	Very limited Low strength	1.00	Somewhat limited Cutbanks cave	0.10	Not limited	
Farnum-----	20	Very limited Low strength Shrink-swell	1.00 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
3511: Saltcreek-----	70	Not limited		Somewhat limited Cutbanks cave Too clayey	0.10 0.00	Not limited	
Naron, sandy substratum-----	30	Not limited		Very limited Cutbanks cave	1.00	Not limited	
3512: Saltcreek-----	50	Not limited		Somewhat limited Cutbanks cave Too clayey	0.10 0.00	Not limited	
Naron-----	50	Not limited		Very limited Cutbanks cave	1.00	Not limited	
3520: Saxman-----	85	Somewhat limited Flooding	0.40	Very limited Cutbanks cave Depth to saturated zone	1.00 1.00	Somewhat limited Droughty	0.15



BUILDING SITE DEVELOPMENT--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3530: Shellabarger, Eroded	45	Somewhat limited Slope	0.16	Very limited Cutbanks cave Slope	1.00 0.16	Somewhat limited Slope	0.16
Albion-----	40	Somewhat limited Slope	0.16	Very limited Cutbanks cave Slope	1.00 0.16	Somewhat limited Slope	0.16
3531: Shellabarger, Moderately Eroded--	50	Not limited		Very limited		Not limited	
Nalim-----	50	Very limited Low strength Shrink-swell	1.00 0.50	Cutbanks cave Very limited Cutbanks cave	1.00 1.00	Not limited	
3532: Shellabarger-----	80	Not limited		Very limited Cutbanks cave	1.00	Not limited	
3533: Shellabarger-----	85	Not limited		Very limited Cutbanks cave	1.00	Not limited	
3534: Shellabarger-----	85	Not limited		Very limited Cutbanks cave	1.00	Not limited	
3535: Shellabarger-----	55	Not limited		Very limited Cutbanks cave	1.00	Not limited	
Nalim-----	45	Very limited Low strength Shrink-swell	1.00 0.50	Very limited Cutbanks cave	1.00	Not limited	
3540: Solvay-----	90	Not limited		Very limited Cutbanks cave Depth to saturated zone	1.00 0.95	Not limited	
3550: Spelvin-----	100	Not limited		Very limited Cutbanks cave	1.00	Not limited	
3639: Taver-----	90	Very limited Low strength Shrink-swell	1.00 1.00	Somewhat limited Cutbanks cave	0.10	Not limited	
3640: Tivin-----	95	Very limited Slope	1.00	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Droughty	1.00 0.98
3641: Tivin-----	45	Somewhat limited Slope	0.16	Very limited Cutbanks cave Slope	1.00 0.16	Somewhat limited Droughty Slope	0.98 0.16
Dillhut-----	40	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.15
3642: Tivin-----	70	Not limited		Very limited Cutbanks cave Depth to saturated zone	1.00 0.03	Somewhat limited Droughty	0.94
Willowbrook, occasionally flooded-----	30	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Cutbanks cave Depth to saturated zone Flooding	1.00 0.95 0.60	Flooding	0.60
3643: Tobin-----	100	Very limited Flooding Low strength Shrink-swell Frost action	1.00 1.00 0.50 0.50	Somewhat limited Flooding Cutbanks cave	0.60 0.10	Somewhat limited Flooding	0.60
3644: Turon-----	65	Not limited		Very limited Cutbanks cave Too clayey	1.00 0.01	Not limited	
Carway-----	20	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone Cutbanks cave	1.00 1.00 0.10	Very limited Ponding Depth to saturated zone	1.00 1.00



BUILDING SITE DEVELOPMENT--Continued  
Reno County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3760: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Blazefork, Protected	25	Very limited Low strength	1.00	Somewhat limited Depth to saturated zone	0.61	Not limited	
		Shrink-swell	1.00	Too clayey	0.12		
Kaskan, Protected---	25	Not limited		Cutbanks cave	0.10	Not limited	
				Very limited Cutbanks cave	1.00		
				Depth to saturated zone	0.16		
3762: Urban Land-----	50	Not rated		Not rated		Not rated	
Darlow-----	25	Very limited Low strength	1.00	Somewhat limited Cutbanks cave	0.10	Very limited Sodium content	1.00
Elmer-----	15	Not limited		Somewhat limited Cutbanks cave	0.10	Very limited Sodium content	1.00
3763: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Imano, Protected----	40	Very limited Low strength Shrink-swell	1.00 0.50	Very limited Cutbanks cave	1.00	Not limited	
				Depth to saturated zone	0.95		
3764: Urban Land, Protected-----	60	Not rated		Not rated		Not rated	
Mahone, Protected---	35	Not limited		Somewhat limited Depth to saturated zone	0.16	Not limited	
				Cutbanks cave	0.10		
3765: Urban Land-----	50	Not rated		Not rated		Not rated	
Saltcreek-----	35	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
				Too clayey	0.00		
Naron-----	15	Not limited		Very limited Cutbanks cave	1.00	Not limited	
3766: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Saxman, Protected---	45	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.15
				Depth to saturated zone	1.00		
3767: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Willowbrook, Protected-----	45	Not limited		Very limited		Not limited	
				Cutbanks cave	1.00		
				Depth to saturated zone	0.95		
3768: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Yaggy, Protected----	45	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.04
				Depth to saturated zone	0.95		
				Depth to dense layer	0.50		



BUILDING SITE DEVELOPMENT--Continued  
Reno County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3900: Warnut-----	75	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone Cutbanks cave	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
3926: Water-----	100	Not rated		Not rated		Not rated	
3966: Willowbrook-----	90	Very limited Flooding	1.00	Very limited Cutbanks cave Depth to saturated zone Flooding	1.00 0.95 0.60	Somewhat limited Flooding	0.60
4004: Yaggy-----	95	Very limited Flooding	1.00	Very limited Cutbanks cave Depth to saturated zone Flooding Depth to dense layer	1.00 0.95 0.60 0.50	Somewhat limited Flooding Droughty	0.60 0.04
4005: Yaggy-----	60	Very limited Flooding	1.00	Very limited Cutbanks cave Depth to saturated zone Flooding Depth to dense layer	1.00 0.95 0.60 0.50	Somewhat limited Flooding Droughty	0.60 0.04
Saxman-----	30	Somewhat limited Flooding	0.40	Very limited Cutbanks cave Depth to saturated zone	1.00 1.00	Somewhat limited Droughty	0.15
4110: Zellmont-----	70	Somewhat limited Shrink-swell	0.50	Somewhat limited Depth to dense layer Depth to soft bedrock Cutbanks cave	0.50 0.29 0.10	Somewhat limited Depth to bedrock	0.29
Poxmash-----	30	Not limited		Very limited Cutbanks cave Depth to dense layer	1.00 0.50	Not limited	



CONSTRUCTION MATERIALS  
Reno County, Kansas

Construction Materials

The following tables give information about the soils as potential sources of gravel, sand, topsoil, reclamation material, and roadfill. Normal compaction, minor processing, and other standard construction practices are assumed.

The soils are rated good, fair, or poor as potential sources of topsoil, reclamation material, and roadfill. The features that limit the soils as sources of these materials are specified in the tables. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of topsoil, reclamation material, or roadfill. The lower the number, the greater the limitation.

The soils are rated as a probable or improbable source of sand and gravel. A rating of probable means that the source material is likely to be in or below the soil. The numerical ratings in these columns indicate the degree of probability. The number 0.00 indicates that the soil is an improbable source. A number between 0.00 and 1.00 indicates the degree to which the soil is a probable source of sand or gravel.

Sand and gravel are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In these tables, only the probability of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the lowest layer of the soil contains sand or gravel, the soil is rated as a probable source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).



CONSTRUCTION MATERIALS--Continued  
Reno County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
990: Abbyville-----	95	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.04
991: Abbyville, rarely flooded-----	45	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.04
Kisiwa, occasionally flooded-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.00
1004: Albion-----	90	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.67 0.91
1011: Albion-----	70	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.67 0.90
Shellabarger-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.09 0.88
1057: Aquents-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.06
1061: Arents, Earthen Dam-	100	Not rated		Not rated	
1062: Arents, Landfill----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1070: Avans-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1071: Avans-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1072: Avans-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1191: Blazefork-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1192: Blazefork-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Kaskan-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.27
1200: Buhler-----	65	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.09



CONSTRUCTION MATERIALS--Continued  
Reno County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
Blazefork-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1324: Carway-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Carbika-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1357: Carway-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Dillhut-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.27
Solvay-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.15 0.56
1359: Clark-----	70	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Ost-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1428: Crete-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1429: Crete-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1553: Darlow-----	70	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.12
Elmer-----	20	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10
1554: Dillhut-----	70	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.27
1555: Dillhut-----	35	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.10 0.13
Plev-----	35	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.41 0.43
1556: Dillhut-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.10 0.13
Solvay-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.15 0.56



CONSTRUCTION MATERIALS--Continued  
Reno County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
1725: Farnum-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Funmar-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1727: Funmar-----	55	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Taver-----	45	Poor Bottom layer Thickest layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.00
1804: Geary-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1807: Geary, Moderately Eroded-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1985: Hayes-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1986: Hayes-----	55	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Solvay-----	20	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.07 0.44
1987: Hayes-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Turon-----	35	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.30
2204: Jamash-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Piedmont-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
2205: Jamash-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Piedmont-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
2206: Jamash-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Piedmont-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00



CONSTRUCTION MATERIALS--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
2207: Jamash-----	80	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
2381: Kanza-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.22 0.90
Ninnescah-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.10 0.12
2390: Kaskan-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.27
2391: Kaskan-----	75	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.36 0.40
2395: Kisiwa-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.00
2509: Ladysmith-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
2556: Langdon-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.50 0.50
2587: Imano-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.66
2588: Longford, Moderately Eroded-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
2812: Mahone-----	95	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.93
2948: Nalim-----	80	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.98
2949: Naron, Moderately Eroded-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.08 0.10
2950: Naron, Moderately Eroded-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.08 0.10
2951: Nash-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00



CONSTRUCTION MATERIALS--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
2952: Nash-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Lucien-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.02
2953: Nash, Moderately Eroded-----	70	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Lucien-----	20	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.02
2955: Nickerson-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.05 0.76
2956: Nickerson-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.05 0.76
2957: Nickerson-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.05 0.76
Punkin-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.19
2958: Ninnescah-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.10 0.12
2959: Ninnescah, saline---	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.31 0.43
3051: Ost-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
3052: Ost-----	55	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Clark-----	45	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
3170: Penalosa-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
3171: Penalosa-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
3180: Pratt-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.84 0.86



CONSTRUCTION MATERIALS--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
3181: Pratt-----	45	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.84 0.86
Turon-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.30
3190: Punkin-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.02
3191: Punkin-----	70	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.02
Taver-----	20	Poor Bottom layer Thickest layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.00
3403: Sand Pit-----	100	Not rated		Not rated	
3469: Smolan-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
3510: Saltcreek-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Funmar-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Farnum-----	20	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
3511: Saltcreek-----	70	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Naron, sandy substratum-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.10 0.90
3512: Saltcreek-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Naron-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.07 0.55
3520: Saxman-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.50
3530: Shellabarger, Eroded	45	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.09 0.88
Albion-----	40	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.67 0.90



CONSTRUCTION MATERIALS--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
3531: Shellabarger, Moderately Eroded--	50	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.09 0.88
Nalim-----	50	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.98
3532: Shellabarger-----	80	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.09 0.88
3533: Shellabarger-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.09 0.88
3534: Shellabarger-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.09 0.88
3535: Shellabarger-----	55	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.09 0.88
Nalim-----	45	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.98
3540: Solvay-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.07 0.44
3550: Spelvin-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.10
3639: Taver-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.00
3640: Tivin-----	95	Poor Bottom layer Thickest layer	0.00 0.00	Good	
3641: Tivin-----	45	Poor Bottom layer Thickest layer	0.00 0.00	Good	
Dillhut-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.10 0.13
3642: Tivin-----	70	Poor Bottom layer Thickest layer	0.00 0.00	Good	
Willowbrook, occasionally flooded-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.61
3643: Tobin-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00



CONSTRUCTION MATERIALS--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
3644: Turon-----	65	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.30
Carway-----	20	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
3760: Urban Land, Protected-----	50	Not rated		Not rated	
Blazefork, Protected	25	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Kaskan, Protected---	25	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.27
3762: Urban Land-----	50	Not rated		Not rated	
Darlow-----	25	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.12
Elmer-----	15	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10
3763: Urban Land, Protected-----	50	Not rated		Not rated	
Imano, Protected----	40	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.66
3764: Urban Land, Protected-----	60	Not rated		Not rated	
Mahone, Protected---	35	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.93
3765: Urban Land-----	50	Not rated		Not rated	
Saltcreek-----	35	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Naron-----	15	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.10 0.90
3766: Urban Land, Protected-----	50	Not rated		Not rated	
Saxman, Protected---	45	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.50
3767: Urban Land, Protected-----	50	Not rated		Not rated	



CONSTRUCTION MATERIALS--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
Willowbrook, Protected-----	45	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.61
3768: Urban Land, Protected-----	50	Not rated		Not rated	
Yaggy, Protected----	45	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.16
3900: Warnut-----	75	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.40 0.89
3926: Water-----	100	Not rated		Not rated	
3966: Willowbrook-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.61
4004: Yaggy-----	95	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.16
4005: Yaggy-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.16
Saxman-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.50
4110: Zellmont-----	70	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Poxmash-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.13



CONSTRUCTION MATERIALS--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
990: Abbyville-----	95	Poor Low content of organic matter Sodium content Too alkaline Water erosion	0.00 0.00 0.00 0.90	Poor Low strength Shrink-swell	0.00 0.87	Poor Sodium content Salinity	0.00 0.88
991: Abbyville, rarely flooded-----	45	Poor Low content of organic matter Sodium content Too alkaline	0.00 0.00 0.00 0.00	Poor Low strength Shrink-swell	0.00 0.87	Poor Sodium content Salinity	0.00 0.88
Kisiwa, occasionally flooded-----	40	Poor Sodium content Too alkaline Too clayey Water erosion Low content of organic matter	0.00 0.00 0.19 0.90 0.91	Poor Depth to saturated zone Shrink-swell	0.00 0.97	Poor Depth to saturated zone Sodium content Too Clayey	0.00 0.00 0.14
1004: Albion-----	90	Poor Low content of organic matter Too sandy Too acid	0.00 0.00 0.95	Good		Poor Too sandy Hard to reclaim Rock fragments	0.00 0.32 0.72
1011: Albion-----	70	Poor Low content of organic matter Too sandy Too acid	0.00 0.00 0.95	Good		Poor Too sandy Hard to reclaim Rock fragments	0.00 0.32 0.72
Shellabarger-----	30	Fair Low content of organic matter Too acid	0.12 0.84	Good		Good	
1057: Aquents-----	100	Poor Too sandy Low content of organic matter Droughty Too acid No water erosion limitation	0.00 0.00 0.45 0.84 0.99	Poor Depth to saturated zone	0.00	Poor Too sandy Depth to saturated zone Rock fragments	0.00 0.00 0.50
1061: Arents, Earthen Dam-	100	Not rated		Not rated		Not rated	
1062: Arents, Landfill----	100	Poor Low content of organic matter	0.00	Poor Slope Low strength	0.00 0.00	Poor Slope	0.00
1070: Avans-----	100	Fair Too acid Low content of organic matter No water erosion limitation	0.46 0.56 0.99	Poor Low strength	0.00	Good	



CONSTRUCTION MATERIALS--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1071: Avans-----	85	Fair Too acid Low content of organic matter No water erosion limitation	0.46 0.56 0.99	Poor Low strength	0.00	Good	
1072: Avans-----	85	Fair Too acid Low content of organic matter No water erosion limitation	0.46 0.56 0.99	Poor Low strength	0.00	Good	
1191: Blazefork-----	90	Poor Too clayey Low content of organic matter Too acid Water erosion	0.00 0.06 0.32 0.90	Poor Low strength Shrink-swell	0.00 0.50	Poor Too Clayey	0.00
1192: Blazefork-----	60	Poor Too clayey Low content of organic matter Too acid Water erosion	0.00 0.06 0.32 0.90	Poor Low strength Shrink-swell	0.00 0.50	Poor Too Clayey	0.00
Kaskan-----	40	Fair Low content of organic matter No water erosion limitation	0.12 0.99	Good		Good	
1200: Buhler-----	65	Poor Sodium content Too alkaline Low content of organic matter Too clayey Too acid Water erosion	0.00 0.00 0.05 0.23 0.88 0.90	Fair Shrink-swell	0.30	Poor Sodium content Too Clayey Salinity	0.00 0.16 0.50
Blazefork-----	30	Poor Too clayey Low content of organic matter Too acid Water erosion	0.00 0.06 0.32 0.90	Poor Low strength Shrink-swell	0.00 0.50	Poor Too Clayey	0.00
1324: Carway-----	50	Fair Low content of organic matter Too acid No water erosion limitation	0.12 0.95 0.99	Poor Depth to saturated zone Low strength Shrink-swell	0.00 0.00 0.89	Poor Depth to saturated zone	0.00
Carbika-----	30	Fair Too clayey Low content of organic matter Too acid No water erosion limitation	0.74 0.88 0.95 0.99	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Too Clayey	0.00 0.53



CONSTRUCTION MATERIALS--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1357: Carway-----	40	Poor Wind erosion  Low content of organic matter Too acid No water erosion limitation	0.00  0.12 0.95 0.99	Poor Depth to saturated zone Low strength  Shrink-swell	0.00  0.00 0.89	Poor Depth to saturated zone	0.00
Dillhut-----	30	Poor Too sandy  Wind erosion  Low content of organic matter Too acid	0.00  0.00  0.12 0.95	Fair Depth to saturated zone	0.14	Poor Too sandy  Depth to saturated zone	0.00  0.14
Solvay-----	30	Fair Low content of organic matter Too acid	0.04 0.97	Good		Good	
1359: Clark-----	70	Poor Carbonate content Low content of organic matter	0.00 0.02	Fair Low strength Shrink-swell	0.22 0.87	Good	
Ost-----	30	Fair Low content of organic matter Carbonate content	0.08 0.68	Good		Fair Carbonate content	0.80
1428: Crete-----	100	Poor Too clayey Too acid Low content of organic matter Water erosion	0.00 0.84 0.88 0.90	Poor Low strength Shrink-swell	0.00 0.12	Poor Too Clayey	0.00
1429: Crete-----	100	Poor Too clayey Too acid Low content of organic matter Water erosion	0.00 0.84 0.88 0.90	Poor Low strength Shrink-swell	0.00 0.12	Poor Too Clayey	0.00
1553: Darlow-----	70	Poor Sodium content Too alkaline Low content of organic matter Too acid Salinity Water erosion	0.00 0.00 0.08 0.16 0.88 0.90	Good		Poor Sodium content Salinity	0.00 0.00
Elmer-----	20	Poor Too alkaline Too acid Low content of organic matter Sodium content No water erosion limitation	0.00 0.16 0.46 0.78 0.99	Fair Shrink-swell	0.99	Poor Sodium content	0.00
1554: Dillhut-----	70	Poor Too sandy  Wind erosion  Low content of organic matter Too acid	0.00  0.00  0.12 0.95	Fair Depth to saturated zone	0.14	Poor Too sandy  Depth to saturated zone	0.00  0.14



CONSTRUCTION MATERIALS--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1555: Dillhut-----	35	Poor Wind erosion Low content of organic matter Too acid	0.00 0.00 0.99	Good		Good	
Plev-----	35	Poor Too sandy  Wind erosion  Low content of organic matter Too acid Droughty	0.00  0.00  0.00 0.95 0.99	Poor Depth to saturated zone	0.00	Poor Too sandy  Depth to saturated zone	0.00  0.00
1556: Dillhut-----	30	Poor Wind erosion Low content of organic matter Too acid	0.00 0.00 0.99	Good		Good	
Solvay-----	30	Fair Low content of organic matter Too acid	0.04  0.97	Good		Good	
1725: Farnum-----	40	Fair Low content of organic matter Too acid	0.12  0.99	Poor Low strength  Shrink-swell	0.00  0.96	Good	
Funmar-----	40	Fair Low content of organic matter No water erosion limitation	0.12  0.99	Poor Low strength	0.00	Good	
1727: Funmar-----	55	Fair Low content of organic matter No water erosion limitation	0.12  0.99	Poor Low strength	0.00	Good	
Taver-----	45	Poor Too clayey No water erosion limitation	0.00  0.99	Poor Low strength Shrink-swell	0.00 0.27	Poor Too Clayey	0.00
1804: Geary-----	100	Fair Low content of organic matter Water erosion Too acid Too clayey	0.88  0.90 0.95 0.98	Poor Low strength  Shrink-swell	0.00  0.87	Fair Too Clayey	0.86
1807: Geary, Moderately Eroded-----	100	Fair Water erosion Too acid Too clayey	0.90 0.95 0.98	Poor Low strength Shrink-swell	0.00 0.87	Fair Too Clayey	0.81
1985: Hayes-----	60	Fair Low content of organic matter Too acid	0.12  0.97	Poor Low strength	0.00	Good	
1986: Hayes-----	55	Poor Wind erosion Low content of organic matter Too acid	0.00 0.12 0.97	Poor Low strength	0.00	Good	



CONSTRUCTION MATERIALS--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Solvay-----	20	Poor Wind erosion Low content of organic matter Too acid	0.00 0.04 0.97	Good		Good	
1987: Hayes-----	40	Poor Wind erosion Low content of organic matter Too acid	0.00 0.12 0.97	Poor Low strength	0.00	Good	
Turon-----	35	Poor Too sandy Wind erosion Too acid Low content of organic matter	0.00 0.00 0.39 0.88	Good		Poor Too sandy Too acid	0.00 0.92
2204: Jamash-----	50	Poor Droughty Depth to bedrock Too clayey Carbonate content No water erosion limitation	0.00 0.00 0.15 0.92 0.99	Poor Depth to bedrock Low strength Shrink-swell	0.00 0.00 0.27	Poor Hard to reclaim Depth to bedrock Too Clayey	0.00 0.00 0.13
Piedmont-----	50	Poor Too clayey Depth to bedrock Low content of organic matter Water erosion Droughty Carbonate content	0.00 0.71 0.88 0.90 0.95 0.97	Poor Depth to bedrock Low strength Shrink-swell	0.00 0.00 0.46	Poor Too Clayey Rock fragments Depth to bedrock Hard to reclaim	0.00 0.12 0.71 0.71
2205: Jamash-----	60	Poor Droughty Depth to bedrock Too clayey Carbonate content No water erosion limitation	0.00 0.00 0.15 0.92 0.99	Poor Depth to bedrock Low strength Shrink-swell	0.00 0.00 0.27	Poor Hard to reclaim Depth to bedrock Too Clayey	0.00 0.00 0.13
Piedmont-----	40	Poor Too clayey Depth to bedrock Low content of organic matter Water erosion Droughty Carbonate content	0.00 0.71 0.88 0.90 0.95 0.97	Poor Depth to bedrock Low strength Shrink-swell	0.00 0.00 0.46	Poor Too Clayey Rock fragments Depth to bedrock Hard to reclaim	0.00 0.12 0.71 0.71
2206: Jamash-----	60	Poor Droughty Depth to bedrock Too clayey Carbonate content No water erosion limitation	0.00 0.00 0.15 0.92 0.99	Poor Depth to bedrock Low strength Shrink-swell	0.00 0.00 0.27	Poor Hard to reclaim Depth to bedrock Too Clayey	0.00 0.00 0.13
Piedmont-----	40	Poor Too clayey Depth to bedrock Low content of organic matter Water erosion Droughty Carbonate content	0.00 0.71 0.88 0.90 0.95 0.97	Poor Depth to bedrock Low strength Shrink-swell	0.00 0.00 0.46	Poor Too Clayey Rock fragments Depth to bedrock Hard to reclaim	0.00 0.12 0.71 0.71



CONSTRUCTION MATERIALS--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2207: Jamash-----	80	Poor Droughty Depth to bedrock Too clayey Carbonate content No water erosion limitation	0.00 0.00 0.15 0.92 0.99	Poor Depth to bedrock Low strength Shrink-swell	0.00 0.00 0.27	Poor Hard to reclaim Depth to bedrock Too Clayey	0.00 0.00 0.13
2381: Kanza-----	50	Fair Low content of organic matter Too sandy Too acid	0.12 0.22 0.95	Fair Depth to saturated zone	0.14	Fair Depth to saturated zone Too sandy	0.14 0.22
Ninnescah-----	50	Fair Low content of organic matter Too sandy	0.08 0.91	Fair Depth to saturated zone	0.53	Fair Depth to saturated zone Too sandy	0.53 0.91
2390: Kaskan-----	85	Fair Low content of organic matter No water erosion limitation	0.12 0.99	Good		Good	
2391: Kaskan-----	75	Fair Too sandy Low content of organic matter No water erosion limitation	0.01 0.12 0.99	Good		Fair Too sandy	0.01
2395: Kisiwa-----	90	Poor Sodium content Too alkaline Too clayey Water erosion Low content of organic matter	0.00 0.00 0.19 0.90 0.91	Poor Depth to saturated zone Shrink-swell	0.00 0.97	Poor Depth to saturated zone Sodium content Too Clayey	0.00 0.00 0.14
2509: Ladysmith-----	100	Poor Too clayey No water erosion limitation	0.00 0.99	Poor Low strength Shrink-swell Depth to saturated zone	0.00 0.56 0.89	Poor Too Clayey Depth to saturated zone	0.00 0.89
2556: Langdon-----	50	Poor Wind erosion Low content of organic matter Too sandy Droughty Too acid	0.00 0.00 0.00 0.38 0.61	Good		Poor Too sandy Too acid	0.00 0.99
2587: Imano-----	85	Fair Low content of organic matter	0.12	Good		Good	
2588: Longford, Moderately Eroded-----	90	Poor Too clayey Low content of organic matter Water erosion	0.00 0.88 0.90	Poor Low strength Shrink-swell	0.00 0.36	Poor Too Clayey	0.00



CONSTRUCTION MATERIALS--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2812: Mahone-----	95	Poor Wind erosion Too acid Low content of organic matter	0.00 0.39 0.82	Good		Good	
2948: Nalim-----	80	Fair Low content of organic matter Too acid	0.88 0.95	Fair Shrink-swell	0.94	Fair Hard to reclaim Hard to reclaim	0.01 0.32
2949: Naron, Moderately Eroded-----	85	Fair Low content of organic matter	0.12	Good		Good	
2950: Naron, Moderately Eroded-----	85	Fair Low content of organic matter	0.12	Good		Fair Slope	0.84
2951: Nash-----	90	Fair Depth to bedrock Low content of organic matter Droughty No water erosion limitation	0.35 0.88 0.92 0.99	Poor Depth to bedrock	0.00	Poor Hard to reclaim Depth to bedrock	0.00 0.35
2952: Nash-----	60	Fair Depth to bedrock Low content of organic matter Droughty No water erosion limitation	0.35 0.88 0.92 0.99	Poor Depth to bedrock	0.00	Poor Hard to reclaim Depth to bedrock	0.00 0.35
Lucien-----	30	Poor Droughty Depth to bedrock No water erosion limitation	0.00 0.00 0.99	Poor Depth to bedrock	0.00	Poor Depth to bedrock	0.00
2953: Nash, Moderately Eroded-----	70	Fair Depth to bedrock Low content of organic matter Droughty No water erosion limitation	0.35 0.88 0.92 0.99	Poor Depth to bedrock	0.00	Poor Hard to reclaim Depth to bedrock Slope	0.00 0.35 0.63
Lucien-----	20	Poor Droughty Depth to bedrock No water erosion limitation	0.00 0.00 0.99	Poor Depth to bedrock	0.00	Poor Depth to bedrock Slope	0.00 0.37
2955: Nickerson-----	100	Fair Low content of organic matter Too acid	0.01 0.74	Good		Good	
2956: Nickerson-----	85	Poor Wind erosion Low content of organic matter Too acid	0.00 0.01 0.74	Good		Good	



CONSTRUCTION MATERIALS--Continued  
Reno County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2957: Nickerson-----	50	Fair Low content of organic matter Too acid	0.01 0.74	Good		Good	
Punkin-----	50	Poor Low content of organic matter Sodium content Too clayey	0.00 0.00 0.00	Fair Shrink-swell	0.81	Poor Sodium content Too Clayey	0.00 0.00
2958: Ninnescah-----	85	Fair Low content of organic matter Too sandy	0.08 0.91	Fair Depth to saturated zone	0.53	Fair Depth to saturated zone Too sandy	0.53 0.91
2959: Ninnescah, saline---	100	Fair Low content of organic matter	0.12	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Salinity	0.00 0.50
3051: Ost-----	90	Fair Low content of organic matter Carbonate content	0.08 0.68	Good		Fair Carbonate content	0.80
3052: Ost-----	55	Fair Low content of organic matter Carbonate content	0.08 0.68	Good		Fair Carbonate content	0.80
Clark-----	45	Poor Carbonate content Low content of organic matter	0.00 0.02	Fair Low strength Shrink-swell	0.22 0.87	Good	
3170: Penalosa-----	100	Fair Low content of organic matter Too clayey Water erosion Too acid	0.10 0.20 0.90 0.95	Poor Low strength Shrink-swell	0.00 0.61	Fair Too Clayey	0.18
3171: Penalosa-----	100	Fair Low content of organic matter Too clayey Water erosion Too acid	0.10 0.20 0.90 0.95	Poor Low strength Shrink-swell	0.00 0.61	Fair Too Clayey	0.18
3180: Pratt-----	85	Poor Wind erosion Too sandy Low content of organic matter Too acid	0.00 0.00 0.00 0.74	Good		Poor Too sandy	0.00
3181: Pratt-----	45	Poor Wind erosion Too sandy Low content of organic matter Too acid	0.00 0.00 0.00 0.74	Good		Poor Too sandy	0.00
Turon-----	30	Poor Too sandy Wind erosion Too acid Low content of organic matter	0.00 0.00 0.39 0.88	Good		Poor Too sandy Too acid	0.00 0.92



CONSTRUCTION MATERIALS--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3190: Punkin-----	90	Poor Sodium content Too clayey Water erosion	0.00 0.00 0.90	Poor Low strength Shrink-swell	0.00 0.25	Poor Sodium content Too Clayey	0.00 0.00
3191: Punkin-----	70	Poor Sodium content Too clayey Water erosion	0.00 0.00 0.90	Poor Low strength Shrink-swell	0.00 0.25	Poor Sodium content Too Clayey	0.00 0.00
Taver-----	20	Poor Too clayey No water erosion limitation	0.00 0.99	Poor Low strength Shrink-swell	0.00 0.27	Poor Too Clayey	0.00
3403: Sand Pit-----	100	Not rated		Not rated		Not rated	
3469: Smolan-----	90	Poor Too clayey Low content of organic matter No water erosion limitation	0.00 0.50 0.99	Poor Low strength Shrink-swell	0.00 0.33	Poor Too Clayey	0.00
3510: Saltcreek-----	50	Fair Too acid Low content of organic matter No water erosion limitation	0.12 0.12 0.99	Poor Low strength Shrink-swell	0.00 0.95	Good	
Funmar-----	30	Fair Low content of organic matter No water erosion limitation	0.12 0.99	Poor Low strength	0.00	Good	
Farnum-----	20	Fair Low content of organic matter Too acid	0.12 0.99	Poor Low strength Shrink-swell	0.00 0.96	Good	
3511: Saltcreek-----	70	Fair Too acid Low content of organic matter No water erosion limitation	0.12 0.12 0.99	Poor Low strength Shrink-swell	0.00 0.95	Good	
Naron, sandy substratum-----	30	Poor Low content of organic matter	0.00	Good		Good	
3512: Saltcreek-----	50	Fair Too acid Low content of organic matter No water erosion limitation	0.12 0.12 0.99	Poor Low strength Shrink-swell	0.00 0.95	Good	
Naron-----	50	Fair Low content of organic matter	0.12	Good		Good	



CONSTRUCTION MATERIALS--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3520: Saxman-----	85	Poor Wind erosion  Low content of organic matter Too sandy Too acid Droughty	0.00  0.00 0.15 0.16 0.89	Fair Depth to saturated zone	0.89	Fair Too sandy  Depth to saturated zone	0.15  0.89
3530: Shellabarger, Eroded	45	Fair Low content of organic matter Too acid	0.12  0.84	Good		Fair Slope	0.84
Albion-----	40	Poor Low content of organic matter Too sandy Too acid	0.00  0.00 0.95	Good		Poor Too sandy  Hard to reclaim Rock fragments Slope	0.00  0.32 0.72 0.84
3531: Shellabarger, Moderately Eroded--	50	Fair Low content of organic matter Too acid	0.12  0.84	Good		Good	
Nalim-----	50	Fair Low content of organic matter Too acid	0.88  0.95	Fair Shrink-swell	0.94	Fair Hard to reclaim  Hard to reclaim	0.01  0.32
3532: Shellabarger-----	80	Poor Wind erosion Low content of organic matter Too acid	0.00 0.12  0.84	Good		Good	
3533: Shellabarger-----	85	Fair Low content of organic matter Too acid	0.12  0.84	Good		Good	
3534: Shellabarger-----	85	Fair Low content of organic matter Too acid	0.12  0.84	Good		Good	
3535: Shellabarger-----	55	Fair Low content of organic matter Too acid	0.12  0.84	Good		Good	
Nalim-----	45	Fair Low content of organic matter Too acid	0.88  0.95	Fair Shrink-swell	0.94	Fair Hard to reclaim  Hard to reclaim	0.01  0.32
3540: Solvay-----	90	Fair Low content of organic matter Too acid	0.04  0.97	Good		Good	
3550: Spelvin-----	100	Poor Wind erosion Low content of organic matter Too acid	0.00 0.12  0.54	Good		Fair Too acid	0.98



CONSTRUCTION MATERIALS--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3639: Taver-----	90	Poor Too clayey No water erosion limitation	0.00 0.99	Poor Low strength Shrink-swell	0.00 0.27	Poor Too Clayey	0.00
3640: Tivin-----	95	Poor Too sandy Wind erosion Low content of organic matter Droughty Too acid	0.00 0.00 0.00 0.36 0.99	Good		Poor Too sandy Slope	0.00 0.00
3641: Tivin-----	45	Poor Too sandy Wind erosion Low content of organic matter Droughty Too acid	0.00 0.00 0.00 0.36 0.99	Good		Poor Too sandy Slope	0.00 0.84
Dillhut-----	40	Poor Wind erosion Low content of organic matter Too acid	0.00 0.00 0.99	Good		Good	
3642: Tivin-----	70	Poor Too sandy Wind erosion Low content of organic matter Too acid Droughty	0.00 0.00 0.12 0.95 0.95	Good		Poor Too sandy	0.00
Willowbrook, occasionally flooded-----	30	Poor Too sandy Low content of organic matter Too acid	0.00 0.00 0.99	Good		Poor Too sandy Rock fragments	0.00 0.50
3643: Tobin-----	100	Fair Low content of organic matter Water erosion	0.12 0.90	Poor Low strength Shrink-swell	0.00 0.92	Good	
3644: Turon-----	65	Poor Too sandy Wind erosion Too acid Low content of organic matter	0.00 0.00 0.39 0.88	Good		Poor Too sandy Too acid	0.00 0.92
Carway-----	20	Poor Wind erosion Low content of organic matter Too acid No water erosion limitation	0.00 0.12 0.95 0.99	Poor Depth to saturated zone Low strength Shrink-swell	0.00 0.00 0.89	Poor Depth to saturated zone	0.00
3760: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	



CONSTRUCTION MATERIALS--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Blazefork, Protected	25	Poor Too clayey Low content of organic matter Too acid Water erosion	0.00 0.06 0.32 0.90	Poor Low strength Shrink-swell	0.00 0.50	Poor Too Clayey	0.00
Kaskan, Protected---	25	Fair Low content of organic matter No water erosion limitation	0.12 0.99	Good		Good	
3762: Urban Land-----	50	Not rated		Not rated		Not rated	
Darlow-----	25	Poor Sodium content Too alkaline Low content of organic matter Too acid Salinity Water erosion	0.00 0.00 0.08 0.16 0.88 0.90	Good		Poor Sodium content Salinity	0.00 0.00
Elmer-----	15	Poor Too alkaline Too acid Low content of organic matter Sodium content No water erosion limitation	0.00 0.16 0.46 0.78 0.99	Fair Shrink-swell	0.99	Poor Sodium content	0.00
3763: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Imano, Protected----	40	Fair Low content of organic matter	0.12	Good		Good	
3764: Urban Land, Protected-----	60	Not rated		Not rated		Not rated	
Mahone, Protected---	35	Poor Wind erosion Too acid Low content of organic matter	0.00 0.39 0.82	Good		Good	
3765: Urban Land-----	50	Not rated		Not rated		Not rated	
Saltcreek-----	35	Fair Too acid Low content of organic matter No water erosion limitation	0.12 0.12 0.99	Poor Low strength Shrink-swell	0.00 0.95	Good	
Naron-----	15	Poor Low content of organic matter	0.00	Good		Good	
3766: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	



CONSTRUCTION MATERIALS--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Saxman, Protected---	45	Poor Wind erosion Low content of organic matter Too sandy Too acid Droughty	0.00 0.00 0.15 0.16 0.89	Fair Depth to saturated zone	0.89	Fair Too sandy Depth to saturated zone	0.15 0.89
3767: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Willowbrook, Protected-----	45	Poor Too sandy Low content of organic matter Too acid	0.00 0.00 0.99	Good		Poor Too sandy Rock fragments	0.00 0.50
3768: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Yaggy, Protected---	45	Poor Too sandy Low content of organic matter Droughty	0.00 0.00 0.93	Good		Poor Too sandy	0.00
3900: Warnut-----	75	Fair Low content of organic matter Too acid Too sandy	0.12 0.74 0.90	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Too sandy	0.00 0.90
3926: Water-----	100	Not rated		Not rated		Not rated	
3966: Willowbrook-----	90	Poor Too sandy Low content of organic matter Too acid	0.00 0.00 0.99	Good		Poor Too sandy Rock fragments	0.00 0.50
4004: Yaggy-----	95	Poor Too sandy Low content of organic matter Droughty	0.00 0.00 0.93	Good		Poor Too sandy Hard to reclaim	0.00 0.74
4005: Yaggy-----	60	Poor Too sandy Low content of organic matter Droughty	0.00 0.00 0.93	Good		Poor Too sandy	0.00
Saxman-----	30	Poor Wind erosion Low content of organic matter Too sandy Too acid Droughty	0.00 0.00 0.15 0.16 0.89	Fair Depth to saturated zone	0.89	Fair Too sandy Depth to saturated zone	0.15 0.89
4110: Zellmont-----	70	Fair Depth to bedrock Droughty Too acid Low content of organic matter	0.71 0.78 0.88 0.95	Poor Depth to bedrock Shrink-swell	0.00 0.99	Fair Depth to bedrock Hard to reclaim	0.71 0.71



CONSTRUCTION MATERIALS--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Poxmash-----	30	Poor Too sandy Low content of organic matter Too acid Droughty	0.00 0.00  0.74 0.79	Fair Depth to bedrock	0.68	Poor Too sandy Rock fragments  Hard to reclaim	0.00 0.00  0.32



RECREATIONAL INTERPRETATIONS  
Reno County, Kansas

## Recreation

The soils of the survey area are rated in the following tables according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in this table can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, sanitary facilities, and water management.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas.

The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.



RECREATIONAL INTERPRETATIONS--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
990: Abbyville-----	95	Very limited Sodium content Restricted permeability	1.00 0.39	Very limited Sodium content Restricted permeability	1.00 0.39	Very limited Sodium content Restricted permeability	1.00 0.39
991: Abbyville, rarely flooded-----	45	Very limited  Sodium content Flooding  Restricted permeability	1.00 1.00 0.39	Very limited  Sodium content Restricted permeability	1.00 0.39	Very limited  Sodium content Restricted permeability	1.00 0.39
Kisiwa, occasionally flooded-----	40	Very limited  Depth to saturated zone Sodium content  Flooding Ponding  Restricted permeability	1.00 1.00 1.00 1.00 1.00	Very limited  Ponding  Depth to saturated zone Sodium content Restricted permeability	1.00 1.00 1.00 1.00	Very limited  Depth to saturated zone Sodium content  Ponding Restricted permeability Flooding	1.00 1.00 1.00 1.00 0.60
1004: Albion-----	90	Somewhat limited Too sandy	0.02	Somewhat limited Too sandy	0.02	Somewhat limited Gravel content Too sandy	0.06 0.02
1011: Albion-----	70	Somewhat limited Too sandy	0.02	Somewhat limited Too sandy	0.02	Somewhat limited Slope Gravel content Too sandy Somewhat limited Slope	0.13 0.06 0.02 0.00
Shellabarger-----	30	Not limited		Not limited		Somewhat limited Slope	0.00
1057: Aquents-----	100	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding  Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
1061: Arents, Earthen Dam-	100	Not rated		Not rated		Not rated	
1062: Arents, Landfill----	100	Very limited Slope Restricted permeability	1.00 1.00	Very limited Slope Restricted permeability	1.00 1.00	Very limited Slope Restricted permeability	1.00 1.00
1070: Avans-----	100	Not limited		Not limited		Not limited	
1071: Avans-----	85	Not limited		Not limited		Somewhat limited Slope	0.00
1072: Avans-----	85	Not limited		Not limited		Somewhat limited Slope	0.87
1191: Blazefork-----	90	Very limited Flooding  Restricted permeability	1.00 0.39	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39
1192: Blazefork-----	60	Very limited Flooding  Restricted permeability	1.00 0.39	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39
Kaskan-----	40	Very limited Flooding	1.00	Not limited		Not limited	
1200: Buhler-----	65	Very limited Sodium content Flooding  Restricted permeability Salinity	1.00 1.00 0.45 0.13	Very limited Sodium content Restricted permeability Salinity	1.00 0.45 0.13	Very limited Sodium content Restricted permeability Salinity	1.00 0.45 0.13
Blazefork-----	30	Very limited		Somewhat limited		Somewhat limited	



RECREATIONAL INTERPRETATIONS--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1324: Carway-----	50	Flooding	1.00	Restricted permeability	0.39	Restricted permeability	0.39
		Restricted permeability	0.39				
		Very limited Depth to saturated zone Ponding	1.00	Very limited Ponding	1.00	Very limited Depth to saturated zone Ponding	1.00
		1.00	1.00	Depth to saturated zone	1.00	1.00	1.00
Carbika-----	30	Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Very limited Depth to saturated zone Ponding	1.00	Very limited Ponding	1.00	Very limited Depth to saturated zone Ponding	1.00
		1.00	1.00	Depth to saturated zone	1.00	1.00	1.00
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
1357: Carway-----	40	Very limited Depth to saturated zone Ponding	1.00	Very limited Ponding	1.00	Very limited Depth to saturated zone Ponding	1.00
		1.00	1.00	Depth to saturated zone	1.00	1.00	1.00
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Too sandy	0.82	Too sandy	0.82	Too sandy	0.82
Dillhut-----	30	Very limited Too sandy Depth to saturated zone	1.00	Very limited Too sandy Depth to saturated zone	1.00	Very limited Too sandy Depth to saturated zone	1.00
		1.00	1.00	0.75	0.75	1.00	1.00
Solvay-----	30	Somewhat limited Too sandy	0.38	Somewhat limited Too sandy	0.38	Somewhat limited Too sandy	0.38
1359: Clark-----	70	Not limited		Not limited		Somewhat limited Slope	0.50
Ost-----	30	Not limited		Not limited		Somewhat limited Slope	0.87
1428: Crete-----	100	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39
1429: Crete-----	100	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability Slope	0.00
1553: Darlow-----	70	Very limited Sodium content Restricted permeability	1.00	Very limited Sodium content Restricted permeability	1.00	Very limited Sodium content Restricted permeability	1.00
Elmer-----	20	0.45	0.45	0.45	0.45	0.45	0.45
		Very limited Sodium content Restricted permeability	1.00	Very limited Sodium content Restricted permeability	1.00	Very limited Sodium content Restricted permeability	1.00
1554: Dillhut-----	70	0.39	0.39	0.39	0.39	0.39	0.39
		Very limited Too sandy Depth to saturated zone	1.00	Very limited Too sandy Depth to saturated zone	1.00	Very limited Too sandy Depth to saturated zone Slope	1.00
1555: Dillhut-----	35	1.00	1.00	0.75	0.75	1.00	1.00
		Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	0.00
Plev-----	35	Very limited Depth to saturated zone Too sandy	1.00	Very limited Depth to saturated zone Too sandy	1.00	Very limited Depth to saturated zone Too sandy	1.00
		0.94	0.94	0.94	0.94	0.94	0.94
1556: Dillhut-----	30	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	1.00
Solvay-----	30	Somewhat limited Too sandy	0.38	Somewhat limited Too sandy	0.38	Somewhat limited Too sandy	0.38
1725: Farnum-----	40	Not limited		Not limited		Not limited	
Funmar-----	40	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39



RECREATIONAL INTERPRETATIONS--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1727: Funmar-----	55	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39
Taver-----	45	Somewhat limited Restricted permeability	0.45	Somewhat limited Restricted permeability	0.45	Somewhat limited Restricted permeability	0.45
1804: Geary-----	100	Not limited		Not limited		Somewhat limited Slope	0.00
1807: Geary, Moderately Eroded-----	100	Not limited		Not limited		Somewhat limited Slope	0.87
1985: Hayes-----	60	Not limited		Not limited		Somewhat limited Slope	0.13
1986: Hayes-----	55	Somewhat limited Too sandy	0.87	Somewhat limited Too sandy	0.87	Somewhat limited Too sandy Slope	0.87 0.13
Solvay-----	20	Somewhat limited Too sandy	0.37	Somewhat limited Too sandy	0.37	Somewhat limited Too sandy	0.37
1987: Hayes-----	40	Somewhat limited Too sandy	0.94	Somewhat limited Too sandy	0.94	Somewhat limited Too sandy Slope	0.94 0.13
Turon-----	35	Somewhat limited Too sandy	0.98	Somewhat limited Too sandy	0.98	Somewhat limited Too sandy Slope	0.98 0.13
2204: Jamash-----	50	Very limited Depth to bedrock Restricted permeability	1.00 0.45	Very limited Depth to bedrock Restricted permeability	1.00 0.45	Very limited Depth to bedrock Restricted permeability	1.00 0.45
Piedmont-----	50	Somewhat limited Restricted permeability	0.45	Somewhat limited Restricted permeability	0.45	Somewhat limited Restricted permeability	0.45
2205: Jamash-----	60	Very limited Depth to bedrock Restricted permeability	1.00 0.45	Very limited Depth to bedrock Restricted permeability	1.00 0.45	Very limited Depth to bedrock Restricted permeability Slope	1.00 0.45 0.00
Piedmont-----	40	Somewhat limited Restricted permeability	0.45	Somewhat limited Restricted permeability	0.45	Somewhat limited Restricted permeability Slope	0.45 0.00
2206: Jamash-----	60	Very limited Depth to bedrock Restricted permeability	1.00 0.45	Very limited Depth to bedrock Restricted permeability	1.00 0.45	Very limited Depth to bedrock Slope	1.00 1.00
Piedmont-----	40	Somewhat limited Restricted permeability	0.45	Somewhat limited Restricted permeability	0.45	Restricted permeability Very limited Slope	0.45 1.00
						Restricted permeability Depth to bedrock	0.45 0.29
2207: Jamash-----	80	Very limited Depth to bedrock Restricted permeability	1.00 0.45	Very limited Depth to bedrock Restricted permeability	1.00 0.45	Very limited Depth to bedrock Slope	1.00 0.87
						Restricted permeability	0.45
2381: Kanza-----	50	Very limited Flooding	1.00	Somewhat limited Depth to saturated zone Flooding	0.75	Very limited Flooding	1.00
		Depth to saturated zone	1.00		0.40	Depth to saturated zone	1.00
Ninnescah-----	50	Very limited Flooding	1.00	Somewhat limited Depth to saturated zone	0.19	Somewhat limited Flooding	0.60
		Depth to saturated zone	0.44			Depth to saturated zone	0.44
2390: Kaskan-----	85	Very limited Flooding	1.00	Not limited		Not limited	



RECREATIONAL INTERPRETATIONS--Continued  
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Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2391: Kaskan-----	75	Very limited Flooding	1.00	Somewhat limited Flooding	0.40	Very limited Flooding	1.00
2395: Kisiwa-----	90	Very limited Depth to saturated zone Sodium content	1.00 1.00	Very limited Ponding Depth to saturated zone Sodium content	1.00 1.00	Very limited Depth to saturated zone Sodium content	1.00 1.00
		Ponding Restricted permeability	1.00 1.00	Ponding Restricted permeability	1.00 1.00	Ponding Restricted permeability	1.00 1.00
2509: Ladysmith-----	100	Somewhat limited Restricted permeability	0.45	Somewhat limited Restricted permeability	0.45	Somewhat limited Restricted permeability	0.45
2556: Langdon-----	50	Very limited Too sandy Slope	1.00 0.00	Very limited Too sandy Slope	1.00 0.00	Very limited Too sandy Slope	1.00 1.00
2587: Imano-----	85	Very limited Flooding	1.00	Not limited		Somewhat limited Flooding	0.60
2588: Longford, Moderately Eroded-----	90	Somewhat limited  Restricted permeability	 0.05	Somewhat limited  Restricted permeability	 0.05	Somewhat limited  Slope Restricted permeability	 0.50 0.05
2812: Mahone-----	95	Very limited Flooding Too sandy	1.00 0.11	Somewhat limited Too sandy	0.11	Somewhat limited Too sandy	0.11
2948: Nalim-----	80	Not limited		Not limited		Not limited	
2949: Naron, Moderately Eroded-----	85	Somewhat limited  Too sandy	 0.04	Somewhat limited  Too sandy	 0.04	Somewhat limited  Slope Too sandy	 0.50 0.04
2950: Naron, Moderately Eroded-----	85	Somewhat limited  Slope Too sandy	 0.16 0.04	Somewhat limited  Slope Too sandy	 0.16 0.04	Very limited  Slope Too sandy	 1.00 0.04
2951: Nash-----	90	Not limited		Not limited		Somewhat limited Slope	0.00
2952: Nash-----	60	Not limited		Not limited		Somewhat limited Slope Depth to bedrock	0.87 0.65
Lucien-----	30	Very limited Depth to bedrock	1.00	Very limited Depth to bedrock	1.00	Very limited Depth to bedrock Slope	1.00 1.00
2953: Nash, Moderately Eroded-----	70	Somewhat limited  Slope	 0.37	Somewhat limited  Slope	 0.37	Very limited  Slope Depth to bedrock	 1.00 0.65
Lucien-----	20	Very limited Depth to bedrock Slope	1.00 0.63	Very limited Depth to bedrock Slope	1.00 0.63	Very limited Slope Depth to bedrock	1.00 1.00
2955: Nickerson-----	100	Somewhat limited Too sandy	0.59	Somewhat limited Too sandy	0.59	Somewhat limited Too sandy	0.59
2956: Nickerson-----	85	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Somewhat limited Too sandy	1.00
2957: Nickerson-----	50	Somewhat limited Too sandy	0.59	Somewhat limited Too sandy	0.59	Somewhat limited Too sandy	0.59
Punkin-----	50	Very limited Sodium content Restricted permeability	1.00 0.45	Very limited Sodium content Restricted permeability	1.00 0.45	Very limited Sodium content Restricted permeability	1.00 0.45
2958: Ninnescah-----	85	Very limited Flooding	1.00	Somewhat limited Depth to saturated zone	0.19	Somewhat limited Flooding	0.60



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Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2959: Ninnescah, saline----	100	Depth to saturated zone	0.44			Depth to saturated zone	0.44
		Very limited Flooding	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Salinity	0.50	Flooding	0.60
		Salinity	0.50			Salinity	0.50
3051: Ost-----	90	Not limited		Not limited		Not limited	
3052: Ost-----	55	Not limited		Not limited		Somewhat limited Slope	0.00
Clark-----	45	Not limited		Not limited		Somewhat limited Slope	0.00
3170: Penalosa-----	100	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39
3171: Penalosa-----	100	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39
3180: Pratt-----	85	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	1.00 1.00
3181: Pratt-----	45	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	1.00 0.13
Turon-----	30	Somewhat limited Too sandy	0.98	Somewhat limited Too sandy	0.98	Somewhat limited Too sandy Slope	0.98 0.13
3190: Punkin-----	90	Very limited Sodium content Restricted permeability	1.00 0.45	Very limited Sodium content Restricted permeability	1.00 0.45	Very limited Sodium content Restricted permeability	1.00 0.45
3191: Punkin-----	70	Very limited Sodium content Restricted permeability	1.00 0.45	Very limited Sodium content Restricted permeability	1.00 0.45	Very limited Sodium content Restricted permeability	1.00 0.45
Taver-----	20	Somewhat limited Restricted permeability	0.45	Somewhat limited Restricted permeability	0.45	Somewhat limited Restricted permeability	0.45
3403: Sand Pit-----	100	Not rated		Not rated		Not rated	
3469: Smolan-----	90	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability Slope	0.39 0.00
3510: Saltcreek-----	50	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability Slope	0.39 0.00
Funmar-----	30	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39
Farnum-----	20	Not limited		Not limited		Not limited	
3511: Saltcreek-----	70	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39
Naron, sandy substratum-----	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.08	Too sandy	0.08	Too sandy	0.08
3512: Saltcreek-----	50	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability Slope	0.39 0.00
Naron-----	50	Not limited		Not limited		Somewhat limited Slope	0.00
3520: Saxman-----	85	Very limited		Somewhat limited		Somewhat limited	



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Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Flooding Too sandy	1.00 0.39	Too sandy	0.39	Too sandy	0.39
3530: Shellabarger, Eroded	45	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
Albion-----	40	Somewhat limited Slope Too sandy	0.16 0.02	Somewhat limited Slope Too sandy	0.16 0.02	Very limited Slope Gravel content Too sandy	1.00 0.06 0.02
3531: Shellabarger, Moderately Eroded--	50	Not limited		Not limited		Somewhat limited	
Nalim-----	50	Not limited		Not limited		Slope Somewhat limited Slope	0.50 0.50
3532: Shellabarger-----	80	Somewhat limited Too sandy	0.82	Somewhat limited Too sandy	0.82	Somewhat limited Too sandy Slope	0.82 0.00
3533: Shellabarger-----	85	Not limited		Not limited		Not limited	
3534: Shellabarger-----	85	Not limited		Not limited		Somewhat limited Slope	0.00
3535: Shellabarger-----	55	Not limited		Not limited		Somewhat limited Slope	0.00
Nalim-----	45	Not limited		Not limited		Somewhat limited Slope	0.00
3540: Solvay-----	90	Somewhat limited Too sandy	0.37	Somewhat limited Too sandy	0.37	Somewhat limited Too sandy	0.37
3550: Spelvin-----	100	Somewhat limited Too sandy	0.94	Somewhat limited Too sandy	0.94	Somewhat limited Too sandy	0.94
3639: Taver-----	90	Somewhat limited Restricted permeability	0.45	Somewhat limited Restricted permeability	0.45	Somewhat limited Restricted permeability	0.45
3640: Tivin-----	95	Very limited Too sandy Slope	1.00 1.00	Very limited Too sandy Slope	1.00 1.00	Very limited Slope Too sandy	1.00 1.00
3641: Tivin-----	45	Very limited Too sandy Slope	1.00 0.16	Very limited Too sandy Slope	1.00 0.16	Very limited Too sandy Slope	1.00 1.00
Dillhut-----	40	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	1.00 0.13
3642: Tivin-----	70	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	1.00 1.00
Willowbrook, occasionally flooded-----	30	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60
3643: Tobin-----	100	Very limited Flooding	1.00	Not limited		Somewhat limited Flooding	0.60
3644: Turon-----	65	Somewhat limited Too sandy	0.98	Somewhat limited Too sandy	0.98	Somewhat limited Too sandy Slope	0.98 0.50
Carway-----	20	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding	1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
		Restricted permeability Too sandy	1.00 0.82	Restricted permeability Too sandy	1.00 0.82	Restricted permeability Too sandy	1.00 0.82
3760: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Blazefork, Protected	25	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39
Kaskan, Protected---	25	Not limited		Not limited		Not limited	



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Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3762: Urban Land-----	50	Not rated		Not rated		Not rated	
Darlow-----	25	Very limited Sodium content Restricted permeability	1.00 0.45	Very limited Sodium content Restricted permeability	1.00 0.45	Very limited Sodium content Restricted permeability	1.00 0.45
Elmer-----	15	Very limited Sodium content Restricted permeability	1.00 0.39	Very limited Sodium content Restricted permeability	1.00 0.39	Very limited Sodium content Restricted permeability	1.00 0.39
3763: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Imano, Protected---	40	Not limited		Not limited		Not limited	
3764: Urban Land, Protected-----	60	Not rated		Not rated		Not rated	
Mahone, Protected---	35	Somewhat limited Too sandy	0.11	Somewhat limited Too sandy	0.11	Somewhat limited Too sandy	0.11
3765: Urban Land-----	50	Not rated		Not rated		Not rated	
Saltcreek-----	35	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39	Somewhat limited Restricted permeability	0.39
Naron-----	15	Somewhat limited Too sandy	0.08	Somewhat limited Too sandy	0.08	Somewhat limited Too sandy	0.08
3766: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Saxman, Protected---	45	Somewhat limited Too sandy	0.39	Somewhat limited Too sandy	0.39	Somewhat limited Too sandy	0.39
3767: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Willowbrook, Protected-----	45	Not limited		Not limited		Not limited	
3768: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Yaggy, Protected---	45	Not limited		Not limited		Not limited	
3900: Warnut-----	75	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
3926: Water-----	100	Not rated		Not rated		Not rated	
3966: Willowbrook-----	90	Very limited Flooding	1.00	Not limited		Somewhat limited Flooding	0.60
4004: Yaggy-----	95	Very limited Flooding	1.00	Not limited		Somewhat limited Flooding	0.60
4005: Yaggy-----	60	Very limited Flooding	1.00	Not limited		Somewhat limited Flooding	0.60
Saxman-----	30	Very limited Flooding Too sandy	1.00 0.39	Somewhat limited Too sandy	0.39	Somewhat limited Too sandy	0.39
4110: Zellmont-----	70	Not limited		Not limited		Not limited	
Poxmash-----	30	Somewhat limited Too sandy	0.04	Somewhat limited Too sandy	0.04	Somewhat limited Gravel content Too sandy	0.06 0.04



RECREATIONAL INTERPRETATIONS--Continued  
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Map symbol and soil name	Pct of map unit	Paths and trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value
990: Abbyville-----	95	Not limited		Very limited Sodium content	1.00
991: Abbyville, rarely flooded-----	45	Not limited		Very limited	
Kisiwa, occasionally flooded-----	40	Very limited		Sodium content Very limited	1.00
		Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Sodium content	1.00
				Depth to saturated zone	1.00
				Flooding	0.60
1004: Albion-----	90	Somewhat limited Too sandy	0.02	Not limited	
1011: Albion-----	70	Somewhat limited Too sandy	0.02	Not limited	
Shellabarger-----	30	Not limited		Not limited	
1057: Aguents-----	100	Very limited Depth to saturated zone	1.00	Very limited Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
				Droughty	0.71
1061: Arents, Earthen Dam-	100	Not rated		Not rated	
1062: Arents, Landfill----	100	Very limited Slope	1.00	Very limited Slope	1.00
		Water erosion	1.00		
1070: Avans-----	100	Not limited		Not limited	
1071: Avans-----	85	Not limited		Not limited	
1072: Avans-----	85	Not limited		Not limited	
1191: Blazefork-----	90	Not limited		Not limited	
1192: Blazefork-----	60	Not limited		Not limited	
Kaskan-----	40	Not limited		Not limited	
1200: Buhler-----	65	Not limited		Very limited Sodium content	1.00
				Salinity	0.13
Blazefork-----	30	Not limited		Not limited	
1324: Carway-----	50	Very limited Depth to saturated zone	1.00	Very limited Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
Carbika-----	30	Very limited Depth to saturated zone	1.00	Very limited Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
1357: Carway-----	40	Very limited Depth to saturated zone	1.00	Very limited Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Too sandy	0.82		
Dillhut-----	30	Very limited Too sandy	1.00	Somewhat limited Depth to saturated zone	0.75
		Depth to saturated zone	0.44	Droughty	0.31
Solvay-----	30	Somewhat limited Too sandy	0.38	Not limited	
1359: Clark-----	70	Not limited		Not limited	
Ost-----	30	Not limited		Not limited	



RECREATIONAL INTERPRETATIONS--Continued  
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Map symbol and soil name	Pct of map unit	Paths and trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1428: Crete-----	100	Not limited		Not limited	
1429: Crete-----	100	Not limited		Not limited	
1553: Darlow-----	70	Not limited		Very limited Sodium content	1.00
Elmer-----	20	Not limited		Very limited Sodium content	1.00
1554: Dillhut-----	70	Very limited Too sandy	1.00	Somewhat limited Depth to saturated zone	0.75
		Depth to saturated zone	0.44	Droughty	0.31
1555: Dillhut-----	35	Very limited Too sandy	1.00	Somewhat limited Droughty	0.15
Plev-----	35	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Too sandy	0.94	Droughty	0.92
1556: Dillhut-----	30	Very limited Too sandy	1.00	Somewhat limited Droughty	0.15
Solvay-----	30	Somewhat limited Too sandy	0.38	Not limited	
1725: Farnum-----	40	Not limited		Not limited	
Funmar-----	40	Not limited		Not limited	
1727: Funmar-----	55	Not limited		Not limited	
Taver-----	45	Not limited		Not limited	
1804: Geary-----	100	Not limited		Not limited	
1807: Geary, Moderately Eroded-----	100	Not limited		Not limited	
1985: Hayes-----	60	Not limited		Not limited	
1986: Hayes-----	55	Somewhat limited Too sandy	0.87	Not limited	
Solvay-----	20	Somewhat limited Too sandy	0.37	Not limited	
1987: Hayes-----	40	Somewhat limited Too sandy	0.94	Not limited	
Turon-----	35	Somewhat limited Too sandy	0.98	Not limited	
2204: Jamash-----	50	Not limited		Very limited Depth to bedrock	1.00
				Droughty	0.86
Piedmont-----	50	Not limited		Somewhat limited Depth to bedrock	0.29
2205: Jamash-----	60	Not limited		Very limited Depth to bedrock	1.00
				Droughty	0.86
Piedmont-----	40	Not limited		Somewhat limited Depth to bedrock	0.29
2206: Jamash-----	60	Not limited		Very limited Depth to bedrock	1.00
				Droughty	0.86
Piedmont-----	40	Not limited		Somewhat limited Depth to bedrock	0.29
2207: Jamash-----	80	Not limited		Very limited Depth to bedrock	1.00
				Droughty	0.86
2381: Kanza-----	50	Somewhat limited Depth to saturated zone	0.44	Very limited Flooding	1.00
		Flooding	0.40	Depth to saturated zone	0.75
Ninnescah-----	50	Not limited		Droughty	0.00
				Somewhat limited Flooding	0.60



RECREATIONAL INTERPRETATIONS--Continued  
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Map symbol and soil name	Pct of map unit	Paths and trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value
				Depth to saturated zone	0.19
2390: Kaskan-----	85	Not limited		Not limited	
2391: Kaskan-----	75	Somewhat limited Flooding	0.40	Very limited Flooding	1.00
2395: Kisiwa-----	90	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding	1.00
				Sodium content	1.00
				Depth to saturated zone	1.00
2509: Ladysmith-----	100	Not limited		Not limited	
2556: Langdon-----	50	Very limited Too sandy	1.00	Somewhat limited Droughty Slope	0.97 0.00
2587: Imano-----	85	Not limited		Somewhat limited Flooding	0.60
2588: Longford, Moderately Eroded-----	90	Not limited		Not limited	
2812: Mahone-----	95	Somewhat limited Too sandy	0.11	Not limited	
2948: Nalim-----	80	Not limited		Not limited	
2949: Naron, Moderately Eroded-----	85	Somewhat limited Too sandy	0.04	Not limited	
2950: Naron, Moderately Eroded-----	85	Somewhat limited Too sandy	0.04	Somewhat limited	
2951: Nash-----	90	Not limited		Slope	0.16
2952: Nash-----	60	Not limited		Somewhat limited Depth to bedrock	0.65
Lucien-----	30	Not limited		Somewhat limited Depth to bedrock	0.65
				Very limited Depth to bedrock	1.00
2953: Nash, Moderately Eroded-----	70	Not limited		Droughty	0.96
				Somewhat limited	
				Depth to bedrock	0.65
Lucien-----	20	Not limited		Slope	0.37
				Very limited Depth to bedrock	1.00
				Droughty	0.96
				Slope	0.63
2955: Nickerson-----	100	Somewhat limited Too sandy	0.59	Not limited	
2956: Nickerson-----	85	Very limited Too sandy	1.00	Not limited	
2957: Nickerson-----	50	Somewhat limited Too sandy	0.59	Not limited	
Punkin-----	50	Not limited		Very limited Sodium content	1.00
2958: Ninnescah-----	85	Not limited		Somewhat limited Flooding	0.60
				Depth to saturated zone	0.19
2959: Ninnescah, saline---	100	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
				Flooding	0.60
3051: Ost-----	90	Not limited		Salinity	0.50
				Not limited	



RECREATIONAL INTERPRETATIONS--Continued  
Reno County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Paths and trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value
3052:					
Ost-----	55	Not limited		Not limited	
Clark-----	45	Not limited		Not limited	
3170:					
Penalosa-----	100	Not limited		Not limited	
3171:					
Penalosa-----	100	Not limited		Not limited	
3180:					
Pratt-----	85	Very limited Too sandy	1.00	Not limited	
3181:					
Pratt-----	45	Very limited Too sandy	1.00	Not limited	
Turon-----	30	Somewhat limited Too sandy	0.98	Not limited	
3190:					
Punkin-----	90	Not limited		Very limited Sodium content	1.00
3191:					
Punkin-----	70	Not limited		Very limited Sodium content	1.00
Taver-----	20	Not limited		Not limited	
3403:					
Sand Pit-----	100	Not rated		Not rated	
3469:					
Smolan-----	90	Not limited		Not limited	
3510:					
Saltcreek-----	50	Not limited		Not limited	
Funmar-----	30	Not limited		Not limited	
Farnum-----	20	Not limited		Not limited	
3511:					
Saltcreek-----	70	Not limited		Not limited	
Naron, sandy substratum-----	30	Somewhat limited Too sandy	0.08	Not limited	
3512:					
Saltcreek-----	50	Not limited		Not limited	
Naron-----	50	Not limited		Not limited	
3520:					
Saxman-----	85	Somewhat limited Too sandy	0.39	Somewhat limited Droughty	0.15
3530:					
Shellabarger, Eroded	45	Not limited		Somewhat limited Slope	0.16
Albion-----	40	Somewhat limited Too sandy	0.02	Somewhat limited Slope	0.16
3531:					
Shellabarger, Moderately Eroded--	50	Not limited		Not limited	
Nalim-----	50	Not limited		Not limited	
3532:					
Shellabarger-----	80	Somewhat limited Too sandy	0.82	Not limited	
3533:					
Shellabarger-----	85	Not limited		Not limited	
3534:					
Shellabarger-----	85	Not limited		Not limited	
3535:					
Shellabarger-----	55	Not limited		Not limited	
Nalim-----	45	Not limited		Not limited	
3540:					
Solvay-----	90	Somewhat limited Too sandy	0.37	Not limited	
3550:					
Spelvin-----	100	Somewhat limited Too sandy	0.94	Not limited	
3639:					
Taver-----	90	Not limited		Not limited	
3640:					
Tivin-----	95	Very limited Too sandy Slope	1.00 0.00	Very limited Slope Droughty	1.00 0.98
3641:					
Tivin-----	45	Very limited Too sandy	1.00	Somewhat limited Droughty Slope	0.98 0.16
Dillhut-----	40	Very limited Too sandy	1.00	Somewhat limited Droughty	0.15



RECREATIONAL INTERPRETATIONS--Continued  
Reno County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Paths and trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value
3642: Tivin-----	70	Very limited Too sandy	1.00	Somewhat limited Droughty	0.94
Willowbrook, occasionally flooded-----	30	Not limited		Somewhat limited	
3643: Tobin-----	100	Not limited		Flooding	0.60
3644: Turon-----	65	Somewhat limited Too sandy	0.98	Somewhat limited Flooding	0.60
Carway-----	20	Very limited Depth to saturated zone Ponding	1.00	Not limited	
			1.00	Very limited Ponding	1.00
		Too sandy	0.82	Depth to saturated zone	1.00
3760: Urban Land, Protected-----	50	Not rated		Not rated	
Blazefork, Protected	25	Not limited		Not limited	
Kaskan, Protected---	25	Not limited		Not limited	
3762: Urban Land-----	50	Not rated		Not rated	
Darlow-----	25	Not limited		Very limited Sodium content	1.00
Elmer-----	15	Not limited		Very limited Sodium content	1.00
3763: Urban Land, Protected-----	50	Not rated		Not rated	
Imano, Protected----	40	Not limited		Not limited	
3764: Urban Land, Protected-----	60	Not rated		Not rated	
Mahone, Protected---	35	Somewhat limited Too sandy	0.11	Not limited	
3765: Urban Land-----	50	Not rated		Not rated	
Saltcreek-----	35	Not limited		Not limited	
Naron-----	15	Somewhat limited Too sandy	0.08	Not limited	
3766: Urban Land, Protected-----	50	Not rated		Not rated	
Saxman, Protected---	45	Somewhat limited Too sandy	0.39	Somewhat limited Droughty	0.15
3767: Urban Land, Protected-----	50	Not rated		Not rated	
Willowbrook, Protected-----	45	Not limited		Not limited	
3768: Urban Land, Protected-----	50	Not rated		Not rated	
Yaggy, Protected----	45	Not limited		Somewhat limited Droughty	0.04
3900: Warnut-----	75	Very limited Depth to saturated zone Ponding	1.00	Very limited Ponding	1.00
			1.00	Depth to saturated zone	1.00
3926: Water-----	100	Not rated		Not rated	



RECREATIONAL INTERPRETATIONS--Continued  
Reno County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Paths and trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value
3966: Willowbrook-----	90	Not limited		Somewhat limited Flooding	0.60
4004: Yaggy-----	95	Not limited		Somewhat limited Flooding Droughty	0.60 0.04
4005: Yaggy-----	60	Not limited		Somewhat limited Flooding Droughty	0.60 0.04
Saxman-----	30	Somewhat limited Too sandy	0.39	Somewhat limited Droughty	0.15
4110: Zellmont-----	70	Not limited		Somewhat limited Depth to bedrock	0.29
Poxmash-----	30	Somewhat limited Too sandy	0.04	Not limited	



WILDLIFE INTERPRETATIONS  
Reno County, Kansas

#### Use and Explanation of Wildlife Interpretations

Soils directly affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the development of water impoundments. The kind and abundance of wildlife that populate an area depend largely on the amount and distribution of food, cover, water, and living space. If any one of these elements is missing, inadequate, or inaccessible, wildlife will be scarce or will not inhabit the area. If the soils have the potential, wildlife habitat can be created or improved by planting appropriate vegetation, properly managing the existing plant cover, and fostering the natural establishment of desirable plants.

In the Wildlife Interpretations table, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

#### Suitability Ratings

The potential of the soil is rated good, fair, poor, or very poor.

Good - means that the element of wildlife habitat or the kind of habitat is easily created, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected if the soil is used for the designated purpose.

Fair - means that the element of wildlife habitat or kind of habitat can be created, improved, or maintained in most places. Moderately intensive management is required for satisfactory results.

Poor - means that limitations are severe for the designated element or kind of wildlife habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and requires intensive effort.

Very Poor - means that limitations are very severe for the designated element or kind of wildlife habitat. Habitat is difficult to create, improve, or maintain in most places, and management is difficult and requires intensive effort.

#### Description of Wildlife Habitat Elements

Openland habitat consists of croplands, pastures, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. The kind of wildlife attracted to these areas include bobwhite quail, pheasant, meadowlark, field sparrow, killdeer, cottontail rabbit, red fox, and coyote.

Woodland habitat consists of hardwood or conifers, or a mixture of these and associated grasses, legumes and wild herbaceous plants. Examples of wildlife attracted to this habitat are wild turkey, thrushes, woodpeckers, owl, tree squirrels, raccoon, and deer.

Wetland habitat consists of water-tolerant plants in open, marshy or swampy, shallow water areas. Examples of wildlife attracted to this habitat are ducks, geese, herons, bitterns, rails, kingfishers, shorebirds, muskrat, mink, and beaver.

The elements of wildlife habitat are described in the following paragraphs.

Grain and seed crops are domestic grains and seed-producing herbaceous plants. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of grain and seed crops are corn, wheat, oats, and barley.

Grasses and legumes are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flooding, and slope. Soil temperature and soil moisture also are considerations. Examples of grasses and legumes are fescue, lovegrass, bromegrass, clover, and alfalfa.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of wild herbaceous plants are bluestem, goldenrod, beggarweed, wheatgrass, and grama.

Hardwood trees and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of hardwood trees and shrubs are depth of the root zone, available water capacity, and wetness. Examples of these plants are oak, poplar, cherry, sweetgum, apple, hawthorn, dogwood, hickory, blackberry, and blueberry. Examples of fruit-producing shrubs that are suitable for planting on soils rated good are Russian-olive, autumn-olive, and crabapple.

Coniferous plants furnish browse and seeds. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the root zone, available water capacity, and wetness. Examples of coniferous plants are pine, spruce, fir, cedar, and juniper.

Shrubs are bushy woody plants that produce fruit, buds, twigs, bark, and foliage. Soil properties and features that affect the growth of shrubs are depth of the root zone, available water capacity, salinity, and soil moisture. Examples of shrubs are fragrant sumac, chokecherry, American plum, sand plum, and gorden currant.

Wetland plants are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Soil properties and features affecting wetland plants are texture of the surface layer, wetness, reaction, salinity, slope, and surface stoniness. Examples of wetland plants are smartweed, wild millet, saltgrass, cordgrass, rushes, sedges, and cattails.



Shallow water areas have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability. Examples of shallow water areas are marshes, waterfowl feeding areas, and ponds.

The habitat for various kinds of wildlife is described in the following paragraphs.

Habitat for openland wildlife consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. Wildlife attracted to these areas include bobwhite quail, pheasant, meadowlark, field sparrow, cottontail, red fox and coyote.

Habitat for woodland wildlife consists of areas of deciduous and/or coniferous plants and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, thrushes, woodpeckers, squirrels, gray fox, raccoon, and deer.

Habitat for wetland wildlife consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, herons, shore birds, muskrat, mink, and beaver.

Habitat for rangeland wildlife consists of areas of shrubs and wild herbaceous plants. Wildlife attracted to rangeland include antelope, deer, cottontail rabbit, prairie chicken, meadowlark, quail, and pheasant.



WILDLIFE INTERPRETATIONS  
Reno County, Kansas

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Shrubs	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life	Range- land wild- life
990: ABBYVILLE-----	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Fair	Poor	Poor	Poor	Poor
991: ABBYVILLE-----	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Fair	Poor	Poor	Poor	Poor
KISIWA-----	Poor	Fair	Poor	Fair	Fair	Very poor	Good	Good	Fair	Fair	Good	Poor
1004: ALBION-----	Fair	Good	Fair	Poor	Poor	Fair	Very poor	Very poor	Fair	Poor	Very poor	Fair
1011: ALBION-----	Fair	Good	Fair	Poor	Poor	Fair	Very poor	Very poor	Fair	Poor	Very poor	Fair
SHELLABARGER----	Good	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor	Good
1057: AQUENTS-----	Poor	Fair	Fair	Fair	Poor	Fair	Good	Good	Fair	Poor	Good	Fair
1061: ARENTS, EARTHEN DAM-----	---	---	---	---	---	---	---	---	---	---	---	---
1062: ARENTS, LANDFILL	---	---	---	---	---	---	---	---	---	---	---	---
1070: AVANS-----	Good	Good	Good	Good	Good	Fair	Poor	Very poor	Good	Good	Very poor	Fair
1071: AVANS-----	Good	Good	Good	Good	Good	Fair	Poor	Very poor	Good	Good	Very poor	Fair
1072: AVANS-----	Good	Good	Good	Good	Good	Fair	Poor	Very poor	Good	Good	Very poor	Fair
1191: BLAZEFORK-----	Good	Good	Fair	Good	Good	Good	Good	Poor	Fair	Good	Fair	Fair
1192: BLAZEFORK-----	Good	Good	Fair	Good	Good	Good	Good	Poor	Fair	Good	Fair	Fair
KASKAN-----	Good	Good	Good	Good	Fair	Good	Fair	Good	Good	Good	Fair	Poor
1200: BUHLER-----	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor
BLAZEFORK-----	Good	Good	Fair	Good	Good	Good	Good	Poor	Fair	Good	Fair	Fair
1324: CARWAY-----	Fair	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
CARBIKA-----	Fair	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
1357: CARWAY-----	Fair	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
DILLHUT-----	Fair	Good	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor	Fair
SOLVAY-----	Fair	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor	Good
1359: CLARK-----	Good	Good	Fair	Fair	Fair	Fair	Poor	Very poor	Good	Good	Very poor	Fair
OST-----	Good	Good	Fair	Fair	Fair	Fair	Poor	Poor	Good	Fair	Poor	Fair
1428: CRETE-----	Good	Good	Good	Fair	Fair	Fair	Very poor	Very poor	Good	Fair	Very poor	Good
1429: CRETE-----	Good	Good	Good	Fair	Fair	Fair	Very poor	Very poor	Good	Fair	Very poor	Good
1553: DARLOW-----	Fair	Fair	Poor	Fair	Poor	Poor	Good	Fair	Fair	Fair	Fair	Poor



WILDLIFE INTERPRETATIONS--Continued  
Reno County, Kansas

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Shrubs	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life	Range- land wild- life
ELMER-----	Fair	Fair	Poor	Fair	Poor	Poor	Poor	Poor	Fair	Fair	Poor	Poor
1554: DILLHUT-----	Fair	Good	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor	Fair
1555: DILLHUT-----	Fair	Good	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor	Fair
PLEV-----	Fair	Good	Good	Good	Good	Good	Good	Fair	Good	Good	Fair	Good
1556: DILLHUT-----	Fair	Good	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor	Fair
SOLVAY-----	Fair	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor	Good
1725: FARNUM-----	Good	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor	Good
FUNMAR-----	Good	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor	Good
1727: FUNMAR-----	Good	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor	Good
TAVER-----	Good	Good	Good	Good	Fair	Fair	Poor	Poor	Good	Fair	Poor	Good
1804: GEARY-----	Good	Good	Good	Fair	Fair	Fair	Poor	Poor	Good	Fair	Poor	Good
1807: GEARY-----	Fair	Good	Good	Fair	Fair	Fair	Very poor	Very poor	Good	Fair	Very poor	Good
1985: HAYES-----	Fair	Fair	Good	Good	Good	Good	Poor	Very poor	Fair	Good	Very poor	Fair
1986: HAYES-----	Fair	Fair	Good	Good	Good	Good	Poor	Very poor	Fair	Good	Very poor	Fair
SOLVAY-----	Fair	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor	Good
1987: HAYES-----	Fair	Fair	Good	Good	Good	Good	Poor	Very poor	Fair	Good	Very poor	Fair
TURON-----	Fair	Good	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Poor	Very poor	Fair
2204: JAMASH-----	Fair	Good	Fair	Poor	Fair	Poor	Poor	Very poor	Fair	Poor	Very poor	Poor
PIEDMONT-----	Fair	Good	Fair	Good	Good	Poor	Poor	Very poor	Fair	Good	Very poor	Poor
2205: JAMASH-----	Fair	Good	Fair	Poor	Fair	Poor	Poor	Very poor	Fair	Poor	Very poor	Poor
PIEDMONT-----	Fair	Good	Fair	Good	Good	Poor	Poor	Very poor	Fair	Good	Very poor	Poor
2206: JAMASH-----	Fair	Good	Fair	Poor	Fair	Poor	Poor	Very poor	Fair	Poor	Very poor	Poor
PIEDMONT-----	Fair	Good	Fair	Good	Good	Poor	Poor	Very poor	Fair	Good	Very poor	Poor
2207: JAMASH-----	Fair	Good	Fair	Poor	Fair	Poor	Poor	Very poor	Fair	Poor	Very poor	Poor
2381: KANZA-----	Very poor	Poor	Fair	Fair	Fair	Fair	Good	Good	Poor	Good	Good	Fair
NINNESCAH-----	Poor	Fair	Fair	Fair	Poor	Fair	Good	Good	Fair	Fair	Good	Fair



WILDLIFE INTERPRETATIONS--Continued  
Reno County, Kansas

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Shrubs	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life	Range- land wild- life
2390: KASKAN-----	Good	Good	Good	Good	Fair	Good	Fair	Good	Good	Good	Fair	Poor
2391: KASKAN-----	Good	Good	Good	Good	Fair	Good	Fair	Good	Good	Good	Fair	Poor
2395: KISIWA-----	Poor	Fair	Poor	Fair	Fair	Very poor	Good	Good	Fair	Fair	Good	Poor
2509: LADYSMITH-----	Fair	Good	Good	Good	Good	Good	Poor	Fair	Good	Good	Poor	Good
2556: LANGDON-----	Poor	Poor	Fair	Good	Fair	Poor	Very poor	Very poor	Poor	Poor	Very poor	Poor
2587: IMANO-----	Fair	Fair	Good	Fair	Fair	Good	Fair	Fair	Fair	Fair	Fair	Good
2588: LONGFORD-----	Fair	Good	Fair	---	---	Fair	Very poor	Very poor	Fair	---	Very poor	Fair
2812: MAHONE-----	Good	Good	Good	Good	Good	Good	Fair	Good	Good	Good	Fair	Poor
2948: NALIM-----	Good	Good	Good	Good	Good	Fair	Fair	Poor	Good	Good	Poor	Fair
2949: NARON-----	Good	Good	Good	Good	Good	Fair	Poor	Very poor	Good	Fair	Very poor	Good
2950: NARON-----	Good	Good	Good	Good	Good	Fair	Poor	Very poor	Good	Fair	Very poor	Good
2951: NASH-----	Fair	Good	Good	Fair	Fair	Fair	Poor	Very poor	Good	Poor	Very poor	Fair
2952: NASH-----	Fair	Good	Good	Fair	Fair	Fair	Poor	Very poor	Good	Poor	Very poor	Fair
LUCIEN-----	Poor	Poor	Fair	---	---	Poor	Poor	Very poor	Fair	---	Very poor	Poor
2953: NASH-----	Fair	Good	Good	Fair	Fair	Fair	Poor	Very poor	Good	Poor	Very poor	Fair
LUCIEN-----	Poor	Poor	Fair	---	---	Poor	Poor	Very poor	Fair	---	Very poor	Poor
2955: NICKERSON-----	Good	Good	Good	Good	Good	Good	Poor	Poor	Good	Fair	Poor	Good
2956: NICKERSON-----	Good	Good	Good	Good	Good	Good	Poor	Poor	Good	Fair	Poor	Good
2957: NICKERSON-----	Good	Good	Good	Good	Good	Good	Poor	Poor	Good	Fair	Poor	Good
PUNKIN-----	Fair	Fair	Poor	Fair	Fair	Poor	Good	Fair	Fair	Poor	Fair	Poor
2958: NINNESCAH-----	Poor	Fair	Fair	Fair	Poor	Fair	Good	Good	Fair	Fair	Good	Fair
2959: NINNESCAH-----	Poor	Poor	Poor	Poor	Poor	Fair	Good	Good	Fair	Poor	Good	Fair
3051: OST-----	Good	Good	Fair	Fair	Fair	Fair	Poor	Poor	Good	Fair	Poor	Fair
3052: OST-----	Good	Good	Fair	Fair	Fair	Fair	Poor	Poor	Good	Fair	Poor	Fair
CLARK-----	Good	Good	Fair	Fair	Fair	Fair	Poor	Very poor	Good	Good	Very poor	Fair
3170: PENALOSA-----	Good	Good	Good	Good	Good	Good	Poor	Fair	Good	Good	Poor	Good



WILDLIFE INTERPRETATIONS--Continued  
Reno County, Kansas

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Shrubs	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life	Range- land wild- life
3171: PENALOSA-----	Good	Good	Good	Good	Good	Good	Poor	Fair	Good	Good	Poor	Good
3180: PRATT-----	Fair	Good	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Poor	Very poor	Fair
3181: PRATT-----	Fair	Good	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Poor	Very poor	Fair
TURON-----	Fair	Good	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Poor	Very poor	Fair
3190: PUNKIN-----	Fair	Fair	Poor	Fair	Fair	Poor	Good	Fair	Fair	Poor	Fair	Poor
3191: PUNKIN-----	Fair	Fair	Poor	Fair	Fair	Poor	Good	Fair	Fair	Poor	Fair	Poor
TAVER-----	Good	Good	Good	Good	Fair	Fair	Poor	Poor	Good	Fair	Poor	Good
3403: SAND PIT-----	---	---	---	---	---	---	---	---	---	---	---	---
3469: SMOLAN-----	Good	Good	Fair	Good	Good	Fair	Poor	Fair	Good	Good	Poor	Fair
3510: SALTCREEK-----	Good	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor	Fair
FUNMAR-----	Good	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor	Good
FARNUM-----	Good	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor	Good
3511: SALTCREEK-----	Good	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor	Fair
NARON-----	Good	Good	Good	Good	Good	Fair	Poor	Very poor	Good	Fair	Very poor	Good
3512: SALTCREEK-----	Good	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor	Fair
NARON-----	Good	Good	Good	Good	Good	Fair	Poor	Very poor	Good	Fair	Very poor	Good
3520: SAXMAN-----	Fair	Fair	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Fair
3530: SHELLABARGER----	Good	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor	Good
ALBION-----	Fair	Good	Fair	Poor	Poor	Fair	Very poor	Very poor	Fair	Poor	Very poor	Fair
3531: SHELLABARGER----	Good	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor	Good
NALIM-----	Good	Good	Good	Good	Good	Fair	Fair	Poor	Good	Good	Poor	Fair
3532: SHELLABARGER----	Good	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor	Good
3533: SHELLABARGER----	Good	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor	Good
3534: SHELLABARGER----	Good	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor	Good
3535: SHELLABARGER----	Good	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor	Good
NALIM-----	Good	Good	Good	Good	Good	Fair	Fair	Poor	Good	Good	Poor	Fair



WILDLIFE INTERPRETATIONS--Continued  
Reno County, Kansas

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Shrubs	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life	Range- land wild- life
3540: SOLVAY-----	Fair	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor	Good
3550: SPELVIN-----	Good	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor	Good
3639: TAYER-----	Good	Good	Good	Good	Fair	Fair	Poor	Poor	Good	Fair	Poor	Good
3640: TIVIN-----	Poor	Poor	Fair	Fair	Fair	Poor	Very poor	Very poor	Poor	Poor	Very poor	Poor
3641: TIVIN-----	Poor	Poor	Fair	Fair	Fair	Poor	Very poor	Very poor	Poor	Poor	Very poor	Poor
DILLHUT-----	Fair	Good	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor	Fair
3642: TIVIN-----	Poor	Poor	Fair	Poor	Poor	Poor	Very poor	Very poor	Poor	Very poor	Very poor	Poor
WILLOWBROOK----	Good	Good	Good	Good	Good	Good	Poor	Poor	Fair	Fair	Poor	Fair
3643: TOBIN-----	Good	Good	Good	Good	Good	Good	Poor	Fair	Good	Good	Poor	Good
3644: TURON-----	Fair	Good	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Poor	Very poor	Fair
CARWAY-----	Fair	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
3760: URBAN LAND-----	---	---	---	---	---	---	---	---	---	---	---	---
BLAZEFORK-----	Good	Good	Fair	Good	Good	Good	Good	Poor	Fair	Good	Fair	Fair
KASKAN-----	Good	Good	Good	Good	Fair	Good	Fair	Good	Good	Good	Fair	Poor
3762: URBAN LAND-----	---	---	---	---	---	---	---	---	---	---	---	---
DARLOW-----	Fair	Fair	Poor	Fair	Poor	Poor	Good	Fair	Fair	Fair	Fair	Poor
ELMER-----	Fair	Fair	Poor	Fair	Poor	Poor	Poor	Poor	Fair	Fair	Poor	Poor
3763: URBAN LAND-----	---	---	---	---	---	---	---	---	---	---	---	---
IMANO-----	Fair	Fair	Good	Fair	Fair	Good	Fair	Fair	Fair	Fair	Fair	Good
3764: URBAN LAND-----	---	---	---	---	---	---	---	---	---	---	---	---
MAHONE-----	Good	Good	Good	Good	Good	Good	Fair	Good	Good	Good	Fair	Poor
3765: URBAN LAND-----	---	---	---	---	---	---	---	---	---	---	---	---
SALTCREEK-----	Good	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor	Fair
NARON-----	Good	Good	Good	Good	Good	Fair	Poor	Very poor	Good	Fair	Very poor	Good
3766: URBAN LAND-----	---	---	---	---	---	---	---	---	---	---	---	---
SAXMAN-----	Fair	Fair	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Fair
3767: URBAN LAND-----	---	---	---	---	---	---	---	---	---	---	---	---
WILLOWBROOK----	Good	Good	Good	Good	Good	Good	Poor	Poor	Fair	Fair	Poor	Fair
3768: URBAN LAND-----	---	---	---	---	---	---	---	---	---	---	---	---
YAGGY-----	Poor	Fair	Good	Good	Good	Good	Fair	Fair	Fair	Good	Good	Fair



WILDLIFE INTERPRETATIONS--Continued  
Reno County, Kansas

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Shrubs	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life	Range- land wild- life
3900: WARWUT-----	Fair	Good	Good	Good	Good	Good	Good	Fair	Good	Good	Fair	Good
3926: WATER-----	---	---	---	---	---	---	---	---	---	---	---	---
3966: WILLOWBROOK----	Good	Good	Good	Good	Good	Good	Poor	Poor	Fair	Fair	Poor	Fair
4004: YAGGY-----	Poor	Fair	Good	Good	Good	Good	Fair	Fair	Fair	Good	Good	Fair
4005: YAGGY-----	Poor	Fair	Good	Good	Good	Good	Fair	Fair	Fair	Good	Good	Fair
SAXMAN-----	Fair	Fair	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Fair
4110: ZELLMONT-----	Good	Good	Good	Fair	Fair	Good	Poor	Very poor	Good	Poor	Very poor	Good
POXMASH-----	Fair	Good	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Poor	Very poor	Fair



YIELDS PER ACRE OF PASTURE AND HAYLAND  
Reno County, Kansas

## Use and Explanation of Pastureland and Hayland Interpretations

This subsection provides information concerning the suitability of soils for the production of pasture and hayland. This subsection may contain pasture and hayland suitability groupings, land capability and yield estimates, yield estimates for individual grasses or legumes, or other information pertaining to the production of forage.

## Pasture and Hayland Suitability Groupings

Soils are placed in pasture and hayland groups according to their suitability for the production of forage. The soils in each group are enough alike to be suited to the same grasses or legumes, to have similar limitations and hazards, to require similar management, and to have similar productivity and other responses to management. Thus, the pasture and hayland suitability group is a convenient way of grouping the soils for their management. If used, these groupings are identified and described in other reports in the subsection.

## Yield Estimates

The average yields per acre that can be expected of the principal pasture or hayland crops, under a high level of management, are presented in this subsection. In any given year, yields may be higher or lower than those indicated in the tables because of variations in rainfall or other climatic factors. The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations are also considered.

Under good management, proper grazing is essential for the production of high quality forage, stand survival, and erosion control. Proper grazing helps plants maintain sufficient and generally vigorous top growth during the growing season. Brush control is essential in many areas, and weed control generally is needed. Rotation grazing and renovation are also important management practices.

The Pasture and Hayland table show yield estimates in tons per acre and animal unit months for pasture and hayland groups. An animal unit month is the amount of forage required by one animal unit (AU) for 30 days. On animal unit (AU) is one (1000 pound) mature cow and a calf up to weaning age (usually six months of age) or their equivalent. The Natural Resources Conservation Service uses 900 pounds of air dry forage as the amount needed to meet this requirement. To maintain a healthy and vigorous plant community, the degree of use should never be greater than 50 percent. Therefore only 25 percent of the total biomass grown is considered consumed by the grazing animal. Animal Unit Months can be converted to air dry pounds per acre production by multiplying the AUM by 30 days, then by 30 pounds per day, and then by four. This figure is the amount of total forage production.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil in the Nontechnical Description section. Specific information on plants and yields can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.



(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)  
Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

Map symbol and soil name	Land capability		Alfalfa hay		Smooth brome grass	
	N	I	N	I	N	I
			Tons	Tons	AUM	AUM
990: Abbyville-----	3s	3s	3.00	5.00	---	---
991: Abbyville, rarely flooded	3s	3s	3.00	5.00	---	---
Kisiwa, occasionally flooded-----	4s	---	---	---	---	---
1004: Albion-----	3e	---	2.00	---	4.00	---
1011: Albion-----	3e	---	2.00	---	4.00	---
Shellabarger-----	2e	---	2.20	6.50	4.50	9.00
1057: Aquents-----	5w	---	---	---	---	---
1061: Arents, Earthen Dam-----	8	---	---	---	---	---
1062: Arents, Landfill-----	---	---	---	---	---	---
1070: Avans-----	1	---	3.50	---	---	---
1071: Avans-----	1	---	3.50	---	---	---
1072: Avans-----	2e	---	3.50	---	---	---
1191: Blazefork-----	2w	2s	3.50	6.00	---	---
1192: Blazefork-----	2s	2s	3.50	6.00	---	---
Kaskan-----	2w	---	---	---	---	---
1200: Buhler-----	2w	2w	3.00	5.00	---	---
Blazefork-----	2s	2s	3.50	6.00	---	---
1324: Carway-----	2w	---	5.00	---	7.00	---
Carbika-----	2w	---	5.00	---	7.00	---
1357: Carway-----	2w	---	5.00	---	7.00	---
Dillhut-----	3e	3e	---	5.50	3.00	8.00
Solvay-----	2e	---	5.00	6.00	5.00	6.00
1359: Clark-----	2c	---	---	---	---	---
Ost-----	2c	---	---	---	---	---
1428: Crete-----	2s	2s	3.20	5.50	---	---
1429: Crete-----	2e	2e	3.20	5.50	---	---
1553: Darlow-----	4s	4s	3.00	5.00	---	---
Elmer-----	3s	3s	3.50	5.00	---	---
1554: Dillhut-----	3e	3e	---	5.50	3.00	8.00



(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)  
Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

Map symbol and soil name	Land capability		Alfalfa hay		Smooth brome grass	
	N	I	N	I	N	I
			Tons	Tons	AUM	AUM
1555: Dillhut-----	3e	3e	---	5.50	3.00	8.00
Plev-----	5w	---	---	---	---	---
1556: Dillhut-----	3e	3e	---	5.50	3.00	8.00
Solvay-----	2e	---	5.00	6.00	5.00	6.00
1725: Farnum-----	2c	1	3.00	7.00	5.00	10.00
Funmar-----	2c	1	3.00	7.00	5.00	10.00
1727: Funmar-----	2c	1	3.00	7.00	5.00	10.00
Taver-----	2s	---	4.00	8.00	6.00	11.00
1804: Geary-----	2e	2e	3.40	7.00	6.00	---
1807: Geary, Moderately Eroded-	3e	3e	2.80	6.00	5.00	---
1985: Hayes-----	3e	3e	3.00	6.00	4.00	9.00
1986: Hayes-----	3e	3e	3.00	6.00	4.00	9.00
Solvay-----	2e	---	5.00	6.00	5.00	6.00
1987: Hayes-----	3e	3e	3.00	6.00	4.00	9.00
Turon-----	3e	3e	---	5.50	3.00	8.00
2204: Jamash-----	4e	---	---	---	---	---
Piedmont-----	2e	---	---	---	---	---
2205: Jamash-----	4e	---	---	---	---	---
Piedmont-----	3e	---	---	---	---	---
2206: Jamash-----	6e	---	---	---	---	---
Piedmont-----	4e	---	---	---	---	---
2207: Jamash-----	6e	---	---	---	---	---
2381: Kanza-----	5w	---	---	---	---	---
Ninnescah-----	5w	---	---	---	---	---
2390: Kaskan-----	2w	---	---	---	---	---
2391: Kaskan-----	5w	---	---	---	---	---
2395: Kisiwa-----	4s	---	---	---	---	---
2509: Ladysmith-----	2s	---	3.00	---	5.00	---
2556: Langdon-----	6e	---	---	---	---	---
2587: Imano-----	3w	---	3.00	5.00	6.00	---



(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)  
Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

Map symbol and soil name	Land capability		Alfalfa hay		Smooth brome grass	
	N	I	N	I	N	I
			Tons	Tons	AUM	AUM
2588: Longford, Moderately Eroded-----	4e	---	2.00	---	5.00	---
2812: Mahone-----	2w	---	---	---	---	---
2948: Nalim-----	2e	2e	3.50	6.50	6.00	9.00
2949: Naron, Moderately Eroded-	3e	3e	3.00	6.50	5.00	9.00
2950: Naron, Moderately Eroded-	3e	3e	3.00	6.50	5.00	9.00
2951: Nash-----	3e	---	---	---	---	---
2952: Nash-----	4e	---	---	---	---	---
Lucien-----	6e	---	---	---	---	---
2953: Nash, Moderately Eroded--	4e	---	---	---	---	---
Lucien-----	6e	---	---	---	---	---
2955: Nickerson-----	3e	3e	3.00	7.00	---	---
2956: Nickerson-----	3e	3e	3.00	7.00	---	---
2957: Nickerson-----	3e	3e	3.00	7.00	---	---
Punkin-----	3s	3s	3.00	5.00	---	---
2958: Ninnescah-----	5w	---	---	---	---	---
2959: Ninnescah, saline-----	5s	---	---	---	---	---
3051: Ost-----	2c	---	---	---	---	---
3052: Ost-----	2c	---	---	---	---	---
Clark-----	2c	---	---	---	---	---
3170: Penalosa-----	2c	1	3.00	7.00	---	---
3171: Penalosa-----	2c	1	3.00	7.00	---	---
3180: Pratt-----	3e	3e	---	5.50	3.00	8.00
3181: Pratt-----	3e	3e	---	5.50	3.00	8.00
Turon-----	3e	3e	---	5.50	3.00	8.00
3190: Punkin-----	3s	3s	3.00	5.00	---	---
3191: Punkin-----	3s	3s	3.00	5.00	---	---
Taver-----	2s	---	4.00	8.00	6.00	11.00
3403: Sand Pit-----	---	---	---	---	---	---



(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)  
Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

Map symbol and soil name	Land capability		Alfalfa hay		Smooth brome grass	
	N	I	N	I	N	I
			Tons	Tons	AUM	AUM
3469: Smolan-----	2e	2e	3.00	6.00	6.00	11.00
3510: Saltcreek-----	3e	1	3.00	7.00	5.00	10.00
Funmar-----	2c	1	3.00	7.00	5.00	10.00
Farnum-----	2c	1	3.00	7.00	5.00	10.00
3511: Saltcreek-----	3e	1	3.00	7.00	5.00	10.00
Naron, sandy substratum--	2e	2e	3.00	7.00	5.00	10.00
3512: Saltcreek-----	3e	1	3.00	7.00	5.00	10.00
Naron-----	3e	3e	3.00	6.50	5.00	9.00
3520: Saxman-----	3e	2e	3.50	7.00	---	---
3530: Shellabarger, Eroded----	2e	---	2.20	6.50	4.50	9.00
Albion-----	3e	---	2.00	---	4.00	---
3531: Shellabarger, Moderately Eroded-----	2e	---	2.20	6.50	4.50	9.00
Nalim-----	2e	2e	3.50	6.50	6.00	9.00
3532: Shellabarger-----	2e	---	2.20	6.50	4.50	9.00
3533: Shellabarger-----	2e	---	2.20	6.50	4.50	9.00
3534: Shellabarger-----	2e	---	2.20	6.50	4.50	9.00
3535: Shellabarger-----	2e	---	2.20	6.50	4.50	9.00
Nalim-----	2e	2e	3.50	6.50	6.00	9.00
3540: Solvay-----	2e	---	5.00	6.00	5.00	6.00
3550: Spelvin-----	2e	---	2.00	5.00	4.00	8.00
3639: Taver-----	2s	---	4.00	8.00	6.00	11.00
3640: Tivin-----	6e	---	---	---	---	---
3641: Tivin-----	6e	---	---	---	---	---
Dillhut-----	3e	3e	---	5.50	3.00	8.00
3642: Tivin-----	6e	---	---	---	---	---
Willowbrook, occasionally flooded-----	3e	2e	4.00	7.00	---	---
3643: Tobin-----	2w	---	---	---	5.00	11.00
3644: Turon-----	3e	3e	---	5.50	3.00	8.00
Carway-----	2w	---	5.00	---	7.00	---



(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)  
Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

Map symbol and soil name	Land capability		Alfalfa hay		Smooth brome grass	
	N	I	N	I	N	I
			Tons	Tons	AUM	AUM
3760: Urban Land, Protected----	---	---	---	---	---	---
Blazefork, Protected-----	2s	2s	3.50	6.00	---	---
Kaskan, Protected-----	2w	---	---	---	---	---
3762: Urban Land-----	---	---	---	---	---	---
Darlow-----	4s	4s	3.00	5.00	---	---
Elmer-----	3s	3s	3.50	5.00	---	---
3763: Urban Land, Protected----	---	---	---	---	---	---
Imano, Protected-----	3w	---	3.00	5.00	6.00	---
3764: Urban Land, Protected----	---	---	---	---	---	---
Mahone, Protected-----	2w	---	---	---	---	---
3765: Urban Land-----	---	---	---	---	---	---
Saltcreek-----	3e	1	3.00	7.00	5.00	10.00
Naron-----	2e	2e	3.00	7.00	5.00	10.00
3766: Urban Land, Protected----	---	---	---	---	---	---
Saxman, Protected-----	3e	2e	3.50	7.00	---	---
3767: Urban Land, Protected----	---	---	---	---	---	---
Willowbrook, Protected---	3e	2e	4.00	7.00	---	---
3768: Urban Land, Protected----	---	---	---	---	---	---
Yaggy, Protected-----	3e	2e	4.50	7.50	---	---
3900: Warnut-----	2w	---	5.00	---	7.00	---
3926: Water-----	---	---	---	---	---	---
3966: Willowbrook-----	3e	2e	4.00	7.00	---	---
4004: Yaggy-----	3e	2e	4.50	7.50	---	---
4005: Yaggy-----	3e	2e	4.50	7.50	---	---
Saxman-----	3e	2e	3.50	7.00	---	---
4110: Zellmont-----	2e	---	2.20	6.50	---	---
Poxmash-----	3e	---	2.00	---	4.00	---



CONSERVATION TREE/SHRUB MANAGEMENT  
Reno County, Kansas

A Conservation Tree/Shrub Suitability Group (CTSG), formerly Windbreak Suitability Group, is a physiographic unit or area having similar climatic and edaphic characteristics that control the selection and height growth of trees and shrubs.

In this table, the Conservation Tree and Shrub Grouping is expressed as a group index number. The group index for Conservation Tree and Shrub groups (CTSG) are a guide for species best suited for different kinds of soil and for prediction height, growth, and effectiveness. The groupings can be used when selection woody plants for windbreaks, wildlife plantings riparian buffers, reforestation, other environmental plantings, recreation, landscaping, wetland restoration or enhancement and critical area plantings. CTSG's are developed to assure satisfactory species selection and adaptation to specific conditions of soil, climate and physiography. CTSG's are a guide for selection species best suited for different kinds of soil and prediction height growth and effectiveness.

All soil series mapped in the state have been placed in 10 groups of similar soil characteristics. Groups 1, 2, 3, 4, 6, and 9 are further divided into subgroups. In addition, all groups provide information by Major Land Resource Areas.

Each tree or shrub species has certain climatic and physiographic limits. Within these parameters a tree or shrub may be well or poorly suited because of soil characteristics. Each tree or shrub also has definable potentials of height growth depending on the factors just mentioned. Accurate definitions of potential heights are necessary for proper windbreak planning and design.

Windbreaks protect livestock, buildings, roads and yards from wind and snow. They also protect fruit trees and gardens, and they furnish habitat for wildlife. Several rows of low-growing and high-growing broadleaf and coniferous trees and shrubs provide the most protection.

Field windbreaks are narrow plantings made at right angles to the prevailing wind and at specific intervals across the field. The interval depends on the erodibility of the soil. Field windbreaks protect cropland and crops from wind, help to keep snow on the fields, and provide food and cover for wildlife.

Environmental plantings help to beautify and screen houses and other buildings and to abate noise. The plants, mostly evergreen shrubs and trees, are closely spaced. To ensure plant survival, a healthy planting stock of suitable species should be planted properly on a well prepared site and maintained in good condition.

Windbreaks are often planted on land that did not grow trees originally. Knowledge of how trees perform on such land can be gained only by observing and recording their performance where trees have been planted and survived. The problem is compounded by the fact that many favorite windbreak species are not indigenous to the areas in which they are planted.

The Kansas Field Office Technical Guide Notice KS-230, Conservation Tree and Shrub Plantings Suitability Groups shows the adapted species listing for each group index number. Showing the height that locally grown trees and shrubs are expected to reach in 20 years on various soils. The estimates are based on measurements and observation of established plantings that have been given adequate care. This information should be used to determine the placement of a windbreak, the area protected and the arrangement of species.

A number of attributes are included in the CTSG species tables for each group number found in this section of the Field Office Technical Guide. These attributes were rated subjectively and assigned a relative value to further assist those unfamiliar with individual species characteristics or desirability for the intended use. Definitions and explanations can be found. Additional information on planning windbreaks and screens and planting and caring for trees and shrubs can be obtained from the local office of the Natural Resources Conservation Service or of the Cooperative Extension Service or from a commercial nursery. See part 537 of the National Forestry Manual for additional information.

In the Tree and Shrub Management table interpretive ratings are given for various aspects of forest and conservation tree and shrub management. Some rating class terms indicate the degree to which the soils are suited to a specified forest management practice. Well suited indicates that the soil has features that are favorable for the specified practice and has no limitations. Good performance can be expected, and little or no maintenance is needed. Moderately well suited indicates that the soil has features that are moderately favorable for the specified practice. One or more soil properties are less than desirable and fair performance can be expected. Some maintenance is needed. Poorly suited indicates that the soil has one or more properties that are unfavorable for the specified practice. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. Unsited indicates that the expected performance of the soil is unacceptable for the specified practice or that extreme measures are needed to overcome the undesirable soil properties.

The paragraphs that follow indicate the soil properties considered in rating the soils for forest and conservation tree and shrub management practices. More detailed information about the criteria used in the ratings is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet. Also, in the Kansas Field Office Technical Guide Notice KS-230, Conservation Tree and Shrub Plantings Suitability Groups.

Ratings in the columns suitability for hand planting and suitability for mechanical planting are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, moderately well suited, poorly suited, or unsited to these methods of planting. It is assumed that necessary site preparation is completed before seedlings are planted.

Ratings in the column suitability for mechanical site preparation (surface) are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsited to this management activity. The part of the soil from the surface to a depth of about 1-foot is considered in the ratings.

Ratings in the column suitability for mechanical site preparation (deep) are based on slope, depth to a restrictive layer, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsited to this management activity. The part of the soil from the surface to a depth of about 3 feet is considered in the ratings.

Ratings in the column potential for seedling mortality are based on flooding, ponding, depth to a water table, content of lime, reaction, salinity, available water capacity, soil moisture regime, soil temperature regime, aspect, and slope. The soils are described as having a low, moderate, or high potential for seedling mortality. See the National Forestry Manual, Subpart B for criteria used in rating management concerns. Specific information on plants and yields can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.



CONSERVATION TREE/SHRUB MANAGEMENT  
Reno County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. Pines and spruces are prone to disease problems. See text for further explanation of ratings in this table.)

Map symbol and soil name	Wind break Group	Suitability for hand planting	Suitability for mechanical planting	Suitability for mechanical site preparation (surface)	Suitability for mechanical site preparation (deep)	Potential for seedling mortality
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
990: Abbyville-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water Soil reaction Salinity
991: Abbyville, rarely flooded-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water Soil reaction Salinity High
Kisiwa, occasionally flooded-----	9W	Unsuited Wetness	Poorly suited Wetness	Unsuited Wetness	Unsuited Wetness	Wetness Soil reaction
1004: Albion-----	6G	Well suited	Well suited	Well suited	Well suited	Moderate Available water
1011: Albion-----	6G	Well suited	Well suited	Well suited	Well suited	Moderate Available water
Shellabarger-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water
1057: Aquents-----	2	Unsuited Wetness Sandiness Stickiness	Unsuited Wetness Sandiness Stickiness	Unsuited Wetness	Unsuited Wetness	High Wetness
1061: Arents, Earthen Dam-		Not rated	Not rated	Not rated	Not rated	Not rated
1062: Arents, Landfill----		Unsuited Horizon table contains no data	Unsuited Horizon table contains no data	Unsuited Horizon table contains no data	Unsuited Horizon table contains no data	High Horizon table contains no data
1070: Avans-----	3	Well suited	Well suited	Well suited	Well suited	Low
1071: Avans-----	3	Well suited	Well suited	Well suited	Well suited	Low
1072: Avans-----	3	Well suited	Moderately suited Slope	Well suited	Well suited	Low
1191: Blazefork-----	4	Poorly suited Stickiness	Poorly suited Stickiness	Poorly suited Stickiness	Well suited	Low
1192: Blazefork-----	4	Poorly suited Stickiness Well suited	Poorly suited Stickiness Well suited	Poorly suited Stickiness Well suited	Well suited	Low
Kaskan-----	1	Well suited	Well suited	Well suited	Well suited	Low
1200: Buhler-----	9W	Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	Moderate Salinity Low
Blazefork-----	4	Poorly suited Stickiness	Poorly suited Stickiness	Poorly suited Stickiness	Well suited	Low
1324: Carway-----	2	Well suited	Well suited	Well suited	Well suited	High Wetness High Wetness
Carbika-----	2	Poorly suited Stickiness	Poorly suited Stickiness	Poorly suited Stickiness	Well suited	High Wetness High Wetness
1357: Carway-----	2	Well suited	Well suited	Well suited	Well suited	High Wetness High
Dillhut-----	7	Moderately suited Sandiness	Moderately suited Sandiness	Well suited	Well suited	Available water Moderate Available water
Solvay-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Soil reaction
1359: Clark-----	3	Well suited	Well suited	Well suited	Well suited	Moderate Soil reaction



CONSERVATION TREE/SHRUB MANAGEMENT  
Reno County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. Pines and spruces are prone to disease problems. See text for further explanation of ratings in this table.)

Map symbol and soil name	Wind break Group	Suitability for hand planting	Suitability for mechanical planting	Suitability for mechanical site preparation (surface)	Suitability for mechanical site preparation (deep)	Potential for seedling mortality
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
Ost-----	8	Well suited	Moderately suited Slope	Well suited	Well suited	Low
1428: Crete-----	4C	Poorly suited Stickiness	Poorly suited Stickiness	Poorly suited Stickiness	Well suited	Low
1429: Crete-----	4C	Poorly suited Stickiness	Poorly suited Stickiness	Poorly suited Stickiness	Well suited	Low
1553: Darlow-----	8	Well suited	Well suited	Well suited	Well suited	Moderate Available water Salinity Low
Elmer-----	8	Well suited	Well suited	Well suited	Well suited	High
1554: Dillhut-----	7	Moderately suited Sandiness	Moderately suited Sandiness	Well suited	Well suited	Available water
1555: Dillhut-----	7	Moderately suited Sandiness	Moderately suited Sandiness	Well suited	Well suited	High
Plev-----	2	Moderately suited Sandiness	Moderately suited Sandiness	Well suited	Well suited	Available water High
1556: Dillhut-----	7	Moderately suited Sandiness	Moderately suited Sandiness	Well suited	Well suited	Wetness
Solvay-----	5	Well suited	Well suited	Well suited	Well suited	High
1725: Farnum-----	4	Well suited	Well suited	Well suited	Well suited	Available water Moderate Available water
Funmar-----	3	Well suited	Well suited	Well suited	Well suited	Low
1727: Funmar-----	3	Well suited	Well suited	Well suited	Well suited	Low
Taver-----	3	Poorly suited Stickiness	Poorly suited Stickiness	Poorly suited Stickiness	Well suited	Moderate Available water
1804: Geary-----	4	Well suited	Well suited	Well suited	Well suited	Low
1807: Geary, Moderately Eroded-----	4	Well suited	Moderately suited Slope	Well suited	Well suited	Low
1985: Hayes-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water
1986: Hayes-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water
Solvay-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water
1987: Hayes-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water Low
Turon-----	7	Moderately suited Sandiness	Moderately suited Sandiness	Well suited	Well suited	Low
2204: Jamash-----	6	Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	Low
Piedmont-----	4	Well suited	Well suited	Well suited	Well suited	Low
2205: Jamash-----	6	Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	Low
Piedmont-----	4	Well suited	Well suited	Well suited	Well suited	Low
2206: Jamash-----	6	Moderately suited	Moderately suited	Well suited	Well suited	Low



CONSERVATION TREE/SHRUB MANAGEMENT  
Reno County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. Pines and spruces are prone to disease problems. See text for further explanation of ratings in this table.)

Map symbol and soil name	Wind break Group	Suitability for hand planting	Suitability for mechanical planting	Suitability for mechanical site preparation (surface)	Suitability for mechanical site preparation (deep)	Potential for seedling mortality
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
Piedmont-----	4	Stickiness Well suited	Stickiness Slope Moderately suited Slope	Well suited	Well suited	Low
2207: Jamash-----	6	Moderately suited Stickiness	Moderately suited Stickiness Slope	Well suited	Well suited	Low
2381: Kanza-----	2	Well suited	Well suited	Well suited	Well suited	Low
Ninnescah-----	9W	Well suited	Well suited	Well suited	Well suited	Moderate Wetness Soil reaction
2390: Kaskan-----	1	Well suited	Well suited	Well suited	Well suited	Low
2391: Kaskan-----	1	Well suited	Well suited	Well suited	Well suited	Low
2395: Kisiwa-----	9W	Unsuited Wetness	Poorly suited Wetness	Unsuited Wetness	Unsuited Wetness	High Wetness Soil reaction
2509: Ladysmith-----	4	Poorly suited Stickiness	Poorly suited Stickiness	Poorly suited Stickiness	Well suited	Low
2556: Langdon-----	7	Moderately suited Sandiness	Moderately suited Sandiness Slope	Well suited	Well suited	Low
2587: Imano-----	9	Well suited	Well suited	Well suited	Well suited	Moderate Soil reaction
2588: Longford, Moderately Eroded-----	3	Poorly suited Stickiness	Poorly suited Stickiness	Poorly suited Stickiness	Well suited	Low
2812: Mahone-----	1	Well suited	Well suited	Well suited	Well suited	Low
2948: Nalim-----	3	Well suited	Well suited	Well suited	Well suited	Low
2949: Naron, Moderately Eroded-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water
2950: Naron, Moderately Eroded-----	5	Well suited	Moderately suited Slope	Well suited	Well suited	Moderate Available water
2951: Nash-----	4	Well suited	Well suited	Well suited	Well suited	Low
2952: Nash-----	4	Well suited	Moderately suited Slope	Well suited	Well suited	Low
Lucien-----	4	Moderately suited Rock fragments	Poorly suited Rock fragments Slope	Poorly suited Rock fragments	Well suited	Low
2953: Nash, Moderately Eroded-----	4	Well suited	Moderately suited Slope	Well suited	Well suited	Low
Lucien-----	4	Moderately suited Rock fragments	Poorly suited Rock fragments Slope	Poorly suited Rock fragments	Well suited	Low
2955: Nickerson-----	5	Well suited	Well suited	Well suited	Well suited	Low
2956: Nickerson-----	5	Well suited	Well suited	Well suited	Well suited	Low
2957: Nickerson-----	5	Well suited	Well suited	Well suited	Well suited	Low
Punkin-----	9	Well suited	Well suited	Well suited	Well suited	Low
2958: Ninnescah-----	9W	Well suited	Well suited	Well suited	Well suited	Moderate



CONSERVATION TREE/SHRUB MANAGEMENT  
Reno County, Kansas

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Map symbol and soil name	Wind break Group	Suitability for hand planting	Suitability for mechanical planting	Suitability for mechanical site preparation (surface)	Suitability for mechanical site preparation (deep)	Potential for seedling mortality
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
2959: Ninnescah, saline---	9	Well suited	Well suited	Well suited	Well suited	Wetness Soil reaction  High Wetness Salinity Soil reaction
3051: Ost-----	8	Well suited	Well suited	Well suited	Well suited	Low
3052: Ost-----	8	Well suited	Well suited	Well suited	Well suited	Low
Clark-----	3	Well suited	Well suited	Well suited	Well suited	Moderate Soil reaction
3170: Penalosa-----	4	Well suited	Well suited	Well suited	Well suited	Low
3171: Penalosa-----	4	Well suited	Well suited	Well suited	Well suited	Low
3180: Pratt-----	7	Well suited	Moderately suited Slope	Well suited	Well suited	Low
3181: Pratt-----	7	Well suited	Well suited	Well suited	Well suited	Low
Turon-----	7	Moderately suited Sandiness	Moderately suited Sandiness	Well suited	Well suited	Low
3190: Punkin-----	9W	Moderately suited Stickiness	Moderately suited Stickiness	Poorly suited Stickiness	Well suited	Low
3191: Punkin-----	9W	Moderately suited Stickiness	Moderately suited Stickiness	Poorly suited Stickiness	Well suited	Low
Taver-----	3	Poorly suited Stickiness	Poorly suited Stickiness	Poorly suited Stickiness	Well suited	Moderate Available water
3403: Sand Pit-----		Not rated	Not rated	Not rated	Not rated	Not rated
3469: Smolan-----	4	Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	Low
3510: Saltcreek-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water Low
Funmar-----	3	Well suited	Well suited	Well suited	Well suited	Low
Farnum-----	4	Well suited	Well suited	Well suited	Well suited	Low
3511: Saltcreek-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water Low
Naron, sandy substratum-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water Moderate Available water
3512: Saltcreek-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water Moderate Available water
Naron-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water Moderate Available water
3520: Saxman-----	1	Well suited	Well suited	Well suited	Well suited	Low
3530: Shellabarger, Eroded	5	Well suited	Moderately suited Slope	Well suited	Well suited	Moderate Available water Moderate
Albion-----	6G	Well suited	Moderately suited Slope	Well suited	Well suited	Available water Moderate
3531: Shellabarger, Moderately Eroded--	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water Low
Nalim-----	3	Well suited	Well suited	Well suited	Well suited	Low



CONSERVATION TREE/SHRUB MANAGEMENT  
Reno County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. Pines and spruces are prone to disease problems. See text for further explanation of ratings in this table.)

Map symbol and soil name	Wind break Group	Suitability for hand planting	Suitability for mechanical planting	Suitability for mechanical site preparation (surface)	Suitability for mechanical site preparation (deep)	Potential for seedling mortality
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
3532: Shellabarger-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water
3533: Shellabarger-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water
3534: Shellabarger-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water
3535: Shellabarger-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water
Nalim-----	3	Well suited	Well suited	Well suited	Well suited	Low
3540: Solvay-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water
3550: Spelvin-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water
3639: Taver-----	3	Poorly suited Stickiness	Poorly suited Stickiness	Poorly suited Stickiness	Well suited	Moderate Available water
3640: Tivin-----	7	Moderately suited Sandiness	Moderately suited Slope Sandiness	Poorly suited Slope	Poorly suited Slope	Low
3641: Tivin-----	7	Moderately suited Sandiness	Moderately suited Sandiness Slope	Well suited	Well suited	Low
Dillhut-----	7	Moderately suited Sandiness	Moderately suited Sandiness	Well suited	Well suited	High Available water
3642: Tivin-----	7	Moderately suited Sandiness	Moderately suited Sandiness Slope	Well suited	Well suited	Low
Willowbrook, occasionally flooded-----	1	Well suited	Well suited	Well suited	Well suited	Moderate Available water
3643: Tobin-----	1	Well suited	Well suited	Well suited	Well suited	Low
3644: Turon-----	7	Moderately suited Sandiness	Moderately suited Sandiness	Well suited	Well suited	Low
Carway-----	2	Well suited	Well suited	Well suited	Well suited	High Wetness
3760: Urban Land, Protected-----		Not rated	Not rated	Not rated	Not rated	Not rated
Blazefork, Protected	4	Poorly suited Stickiness	Poorly suited Stickiness	Poorly suited Stickiness	Well suited	Low
Kaskan, Protected---	1	Well suited	Well suited	Well suited	Well suited	Low
3762: Urban Land-----		Not rated	Not rated	Not rated	Not rated	Not rated
Darlow-----	8	Well suited	Well suited	Well suited	Well suited	Moderate Available water Salinity Low
Elmer-----	8	Well suited	Well suited	Well suited	Well suited	Not rated
3763: Urban Land, Protected-----		Not rated	Not rated	Not rated	Not rated	Not rated
Imano, Protected----	9	Well suited	Well suited	Well suited	Well suited	Moderate



CONSERVATION TREE/SHRUB MANAGEMENT  
Reno County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. Pines and spruces are prone to disease problems. See text for further explanation of ratings in this table.)

Map symbol and soil name	Wind break Group	Suitability for hand planting	Suitability for mechanical planting	Suitability for mechanical site preparation (surface)	Suitability for mechanical site preparation (deep)	Potential for seedling mortality
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
3764: Urban Land, Protected-----		Not rated	Not rated	Not rated	Not rated	Soil reaction Not rated
Mahone, Protected---	1	Well suited	Well suited	Well suited	Well suited	Low
3765: Urban Land-----		Not rated	Not rated	Not rated	Not rated	Not rated
Saltcreek-----	5	Well suited	Well suited	Well suited	Well suited	Moderate Available water Low
Naron-----	5	Well suited	Well suited	Well suited	Well suited	Low
3766: Urban Land, Protected-----		Not rated	Not rated	Not rated	Not rated	Not rated
Saxman, Protected---	1	Well suited	Well suited	Well suited	Well suited	Low
3767: Urban Land, Protected-----		Not rated	Not rated	Not rated	Not rated	Not rated
Willowbrook, Protected-----	1	Well suited	Well suited	Well suited	Well suited	Moderate Available water
3768: Urban Land, Protected-----		Not rated	Not rated	Not rated	Not rated	Not rated
Yaggy, Protected---	1	Well suited	Well suited	Well suited	Well suited	Moderate Available water
3900: Warnut-----	2	Well suited	Well suited	Well suited	Well suited	High Wetness
3926: Water-----		Not rated	Not rated	Not rated	Not rated	Not rated
3966: Willowbrook-----	1	Well suited	Well suited	Well suited	Well suited	Moderate Available water
4004: Yaggy-----	1	Well suited	Well suited	Well suited	Well suited	Moderate Available water
4005: Yaggy-----	1	Well suited	Well suited	Well suited	Well suited	Moderate Available water Low
Saxman-----	1	Well suited	Well suited	Well suited	Well suited	Low
4110: Zellmont-----	6	Well suited	Well suited	Well suited	Well suited	Low
Poxmash-----	6	Well suited	Well suited	Well suited	Well suited	Low



ENGINEERING INDEX PROPERTIES  
Reno County, Kansas

Engineering Index Properties table gives the engineering classifications and the range of index properties for the layers of each soil in the survey area. Depth to the upper and lower boundaries of each layer is indicated. Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. Loam, for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, gravelly. Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system (ASTM, 1998) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 1998). The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection. If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest. The AASHTO classification for soils tested, with group index numbers in parentheses, is given in Engineering Index Properties table.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage. Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an oven-dry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and plasticity index (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination. The estimates of particle-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is generally omitted in the table.



ENGINEERING INDEX PROPERTIES--Continued  
Reno County, Kansas

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
990: Abbyville-----	0-8	Loam	CL	A-4, A-6	0	0	100	100	85-95	50-70	25-35	10-15
	8-15	Sandy clay loam	CL, SC	A-4, A-6	0	0	100	100	90-100	45-65	30-35	10-15
	15-24	Clay loam	CL	A-6, A-7-6	0	0	100	100	90-100	50-80	35-45	15-20
	24-35	Clay loam	CL	A-6, A-7-6	0	0	100	100	90-100	50-80	35-45	15-20
	35-49	Clay loam	CL	A-7-6, A-6	0	0	100	100	90-100	50-80	35-45	15-20
	49-61	Sandy clay loam	CL, SC	A-6, A-7-6	0	0	100	100	80-100	40-65	30-42	15-20
	61-69	Loam	CL, SC	A-6, A-7-6	0	0	100	100	80-100	40-65	30-42	15-20
	69-80	Clay loam	CL, SC	A-7-6, A-6	0	0	100	100	80-100	40-65	30-42	15-20
991: Abbyville, rarely flooded	0-8	Fine sandy loam	SC-SM	A-4	0	0	100	100	85-95	36-45	20-30	5-10
	8-15	Sandy clay loam	CL, SC	A-4, A-6	0	0	100	100	90-100	45-65	30-35	10-15
	15-24	Clay loam	CL	A-6, A-7-6	0	0	100	100	90-100	50-80	35-45	15-20
	24-35	Clay loam	CL	A-6, A-7-6	0	0	100	100	90-100	50-80	35-45	15-20
	35-49	Clay loam	CL	A-6, A-7-6	0	0	100	100	90-100	50-80	35-45	15-20
	49-61	Sandy clay loam	CL, SC	A-6, A-7-6	0	0	100	100	80-100	40-65	30-42	15-20
	61-69	Loam	CL, SC	A-6, A-7-6	0	0	100	100	80-100	40-65	30-42	15-20
	69-80	Clay loam	CL, SC	A-6, A-7-6	0	0	100	100	80-100	40-65	30-42	15-20
Kisiwa, occasionally flooded-----	0-4	Loam	CL	A-4, A-6	0	0	100	100	85-96	60-75	30-35	10-15
	4-7	Loam	CL	A-6, A-4	0	0	100	100	85-96	60-75	30-35	10-15
	7-14	Clay loam	CL	A-7-6, A-6	0	0	100	95-100	90-100	65-95	35-45	15-20
	14-23	Clay loam	CL	A-7-6, A-6	0	0	100	95-100	90-100	65-95	35-45	15-20
	23-31	Clay	CL, CH	A-7-6, A-6	0	0	100	95-100	90-100	70-80	35-55	15-30
	31-40	Clay	CL, CH	A-7-6, A-6	0	0	100	95-100	90-100	70-80	35-55	15-30
	40-46	Loam	CL, CH	A-7-6, A-6	0	0	94-100	90-100	85-100	55-80	35-55	15-30
	46-52	Fine sandy loam	CL, ML, SM, SC	A-4	0	0	85-100	82-100	60-95	40-50	0-30	NP-10
	52-58	Fine sandy loam	ML, CL, SM, SC	A-4	0	0	89-100	80-100	60-95	40-50	0-30	NP-10
	58-65	Stratified coarse sand to fine sandy loam	SM, SC, SC-SM	A-4, A-2-4	0	0	100	95-100	50-90	15-60	0-25	NP-10
	65-80	Stratified coarse sand	SM, SC, SC-SM	A-2-4	0	0	100	100	50-70	15-30	0-25	NP-10
1004: Albion-----	0-9	Sandy loam	SC, SC-SM, SM	A-2-4, A-4	0	0	100	75-100	60-90	25-45	0-25	NP-10
	9-16	Sandy loam	SM, SC, SC-SM	A-2-4, A-4	0	0	85-100	75-100	50-95	25-40	20-30	NP-10
	16-27	Sandy loam	SC, SC-SM, SM	A-2-4, A-4	0	0	85-100	75-100	50-95	25-40	20-30	NP-10
	27-48	Loamy coarse sand	SC, SC-SM, SM	A-1-b, A-2-4	0	0	85-100	75-90	40-70	15-30	0-25	NP-10
	48-80	Sand	GM, GP-GM, SM, SP-SM, SP-SC, GP-GC	A-3, A-1-b, A-2-4	0	0-5	40-100	35-85	30-70	5-30	0-20	NP-5
1011: Albion-----	0-9	Sandy loam	SC, SC-SM, SM	A-2-4, A-4	0	0	100	75-100	60-90	25-45	0-25	NP-10
	9-16	Sandy loam	SC, SC-SM, SM	A-2-4, A-4	0	0	85-100	75-100	50-95	25-40	20-30	NP-10
	16-27	Sandy loam	SC, SC-SM, SM	A-2-4, A-4	0	0	85-100	75-100	50-95	25-40	20-30	NP-10
	27-48	Loamy coarse sand	SC, SC-SM, SM	A-1-b, A-2-4	0	0	85-100	75-90	40-70	15-30	0-25	NP-10
	48-80	Sand	GM, GP-GM, SM, SP-SM, GP-GC, SP-SC	A-3, A-1-b, A-2-4	0	0-5	40-100	35-85	30-70	5-30	0-20	NP-5
Shellabarger---	0-7	Sandy loam	SM, ML	A-4, A-2	0	0	95-100	95-100	75-100	30-55	0-30	NP-5
	7-11	Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	11-19	Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	19-33	Sandy loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	33-47	Coarse sandy loam	SC, SM, SP- SM, SC-SM, SP-SC	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
	47-59	Loamy sand	SC, SM, SP- SM, SC-SM, SP-SC	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
	59-73	Sand	SC, SM, SP- SM, SC-SM, SP-SC	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
	73-80	Sand	SC, SM, SP- SM, SC-SM, SP-SC	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
1057: Aquents-----	0-3	Silty clay loam	CL	A-7, A-6	0	0	100	100	100	90-100	35-50	15-30
	3-8	Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	8-12	Stratified gravelly coarse sand	SP, SP-SM	A-1-b, A-3	0	0	85-100	75-95	35-55	1-10	0-0	NP
	12-80	Stratified gravelly coarse sand to sand	SP, SP-SM	A-1-b, A-3	0	0	85-100	75-95	35-55	1-10	0-0	NP
1061: Arents, Earthen Dam-----	---	---	---	---	---	---	---	---	---	---	---	---
1062: Arents, Landfil	---	---	---	---	---	---	---	---	---	---	---	---



ENGINEERING INDEX PROPERTIES--Continued  
Reno County, Kansas

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index	
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200			
	In				Pct	Pct					Pct		
1070: Avans-----	0-5	Loam	CL	A-6	0	0	100	100	95-100	80-100	25-30	10-15	
	5-10	Loam	CL	A-6	0	0	100	100	95-100	80-100	25-30	10-15	
	10-14	Loam	CL	A-6	0	0	100	100	95-100	80-100	25-30	10-15	
	14-19	Clay loam	CL	A-6, A-7-6	0	0	100	100	95-100	80-95	35-45	15-20	
	19-30	Clay loam	CL	A-6, A-7-6	0	0	100	100	95-100	80-95	35-45	15-20	
	30-43	Loam	CL	A-6	0	0	100	100	95-100	80-95	30-35	10-15	
	43-53	Loam	CL	A-6	0	0	100	100	95-100	80-95	30-35	10-15	
	53-65	Silt loam	CL	A-6	0	0	100	100	95-100	80-95	30-35	10-15	
	65-80	Loam	CL	A-6	0	0	99-100	99-100	95-100	80-95	30-35	10-15	
	1071: Avans-----	0-5	Loam	CL	A-6	0	0	100	100	95-100	80-100	25-30	10-15
5-10		Loam	CL	A-6	0	0	100	100	95-100	80-100	25-30	10-15	
10-14		Silt loam	CL	A-6	0	0	100	100	95-100	80-100	25-30	10-15	
14-19		Clay loam	CL	A-6, A-7-6	0	0	100	100	95-100	80-95	35-45	15-20	
19-30		Loam	CL	A-6, A-7-6	0	0	100	100	95-100	80-95	35-45	15-20	
30-43		Loam	CL	A-6	0	0	100	100	95-100	80-95	30-35	10-15	
43-53		Silt loam	CL	A-6	0	0	100	100	95-100	80-95	30-35	10-15	
53-65		Silt loam	CL	A-6	0	0	100	100	95-100	80-95	30-35	10-15	
65-80		Loam	CL	A-6	0	0	99-100	99-100	95-100	80-95	30-35	10-15	
1072: Avans-----		0-5	Loam	CL	A-6	0	0	100	100	95-100	80-100	25-30	10-15
	5-10	Loam	CL	A-6	0	0	100	100	95-100	80-100	25-30	10-15	
	10-14	Silt loam	CL	A-6	0	0	100	100	95-100	80-100	25-30	10-15	
	14-19	Clay loam	CL	A-6, A-7-6	0	0	100	100	95-100	80-95	35-45	15-20	
	19-30	Loam	CL	A-6, A-7-6	0	0	100	100	95-100	80-95	35-45	15-20	
	30-43	Loam	CL	A-6	0	0	100	100	95-100	80-95	30-35	10-15	
	43-53	Silt loam	CL	A-6	0	0	100	100	95-100	80-95	30-35	10-15	
	53-65	Silt loam	CL	A-6	0	0	100	100	95-100	80-95	30-35	10-15	
	65-80	Loam	CL	A-6	0	0	99-100	99-100	95-100	80-95	30-35	10-15	
	1191: Blazefork-----	0-3	Silty clay loam	CL, CH	A-7-6	0	0	100	100	95-100	85-95	45-55	25-35
3-7		Silty clay loam	CH, CL	A-7-6	0	0	100	100	95-100	85-95	45-55	25-35	
7-14		Silty clay	CH	A-7-6	0	0	100	100	95-100	90-95	50-65	30-40	
14-22		Silty clay	CH	A-7-6	0	0	100	100	95-100	90-95	50-65	30-40	
22-29		Silty clay	CH	A-7-6	0	0	100	100	95-100	90-95	50-65	30-40	
29-34		Silty clay	CH	A-7-6	0	0	100	100	95-100	90-95	50-65	30-40	
34-40		Silty clay	CL	A-7-6	0	0	100	100	85-100	75-85	40-50	20-30	
40-48		Silty clay loam	CL	A-7-6	0	0	100	100	85-100	75-85	40-50	20-30	
48-61		Clay loam	CL	A-7-6	0	0	100	100	85-100	75-85	40-50	20-30	
61-80		Loam	CL	A-7-6	0	0	100	100	85-100	75-85	40-50	20-30	
1192: Blazefork-----	0-3	Silty clay loam	CL, CH	A-7-6	0	0	100	100	95-100	85-95	45-55	25-35	
	3-7	Silty clay loam	CH, CL	A-7-6	0	0	100	100	95-100	85-95	45-55	25-35	
	7-14	Silty clay	CH	A-7-6	0	0	100	100	95-100	90-95	50-65	30-40	
	14-22	Silty clay	CH	A-7-6	0	0	100	100	95-100	90-95	50-65	30-40	
	22-29	Silty clay	CH	A-7-6	0	0	100	100	95-100	90-95	50-65	30-40	
	29-34	Silty clay	CH	A-7-6	0	0	100	100	95-100	90-95	50-65	30-40	
	34-40	Silty clay	CL	A-7-6	0	0	100	100	85-100	75-85	40-50	20-30	
	40-48	Silty clay loam	CL	A-7-6	0	0	100	100	85-100	75-85	40-50	20-30	
	48-61	Clay loam	CL	A-7-6	0	0	100	100	85-100	75-85	40-50	20-30	
	61-80	Loam	CL	A-7-6	0	0	100	100	85-100	75-85	40-50	20-30	
Kaskan-----	0-7	Loam	CL	A-6	0	0	100	100	95-100	85-100	30-35	10-15	
	7-17	Clay loam	CL	A-6, A-7	0	0	100	100	100	85-100	35-45	15-20	
	17-24	Loam	CL	A-6	0	0	100	100	80-95	60-80	30-35	10-15	
	24-35	Fine sandy loam	SC, SC-SM	A-2-4, A-4	0	0	100	100	70-85	30-45	20-30	5-10	
	35-41	Loamy fine sand	SM	A-2-4	0	0	100	95-100	65-85	15-30	0-0	NP	
	41-47	Fine sand	SM	A-2-4	0	0	100	95-100	65-85	15-30	0-0	NP	
	47-66	Sand	SM	A-2-4	0	0	100	95-100	65-85	15-30	0-0	NP	
	66-80	Stratified gravelly coarse sand to sand	SP, SP-SM	A-1-b, A-2-4, A-3	0	0	95-100	75-95	35-55	1-10	0-0	NP	
	1200: Buhler-----	0-3	Silty clay loam	CH, CL	A-6, A-7-6	0	0	100	100	95-100	85-95	35-55	15-30
		3-8	Silty clay loam	CH, CL	A-6, A-7-6	0	0	100	100	95-100	85-95	35-55	15-30
8-12		Silt loam	CL	A-6	0	0	100	100	80-95	60-85	25-30	10-15	
12-16		Silt loam	CL	A-6	0	0	100	100	80-95	60-85	25-30	10-15	
16-24		Clay loam	CL	A-6, A-7-6	0	0	100	100	95-100	90-99	30-50	15-25	
24-36		Silty clay loam	CL	A-6, A-7-6	0	0	100	100	95-100	90-99	30-50	15-25	
36-42		Silty clay loam	CL	A-6, A-7-6	0	0	100	100	95-100	90-99	30-50	15-25	
42-50		Clay	CH, CL	A-6, A-7-6	0	0	100	100	80-100	75-95	35-55	15-30	
50-58		Clay loam	CH, CL	A-6, A-7-6	0	0	100	100	80-100	75-95	35-55	15-30	
58-76		Fine sandy loam	CL, CL-ML, SC, SC-SM	A-4	0	0	100	100	55-70	40-60	20-30	5-10	
76-80	Loam	CL, CL-ML, SC, SC-SM	A-4	0	0	100	100	55-70	40-60	20-30	5-10		
Blazefork-----	0-3	Silty clay loam	CL, CH	A-7-6	0	0	100	100	95-100	85-95	45-55	25-35	
	3-7	Silty clay loam	CH, CL	A-7-6	0	0	100	100	95-100	85-95	45-55	25-35	
	7-14	Silty clay	CH	A-7-6	0	0	100	100	95-100	90-95	50-65	30-40	
	14-22	Silty clay	CH	A-7-6	0	0	100	100	95-100	90-95	50-65	30-40	
	22-29	Silty clay	CH	A-7-6	0	0	100	100	95-100	90-95	50-65	30-40	
	29-34	Silty clay	CH	A-7-6	0	0	100	100	95-100	90-95	50-65	30-40	
	34-40	Silty clay	CL	A-7-6	0	0	100	100	85-100	75-85	40-50	20-30	
	40-48	Silty clay loam	CL	A-7-6	0	0	100	100	85-100	75-85	40-50	20-30	
	48-61	Clay loam	CL	A-7-6	0	0	100	100	85-100	75-85	40-50	20-30	
	61-80	Loam	CL	A-7-6	0	0	100	100	85-100	75-85	40-50	20-30	



ENGINEERING INDEX PROPERTIES--Continued  
Reno County, Kansas

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1324: Carway-----	0-7	Fine sandy loam	SC, CL	A-2-6, A-6	0	0	100	100	80-95	30-55	20-30	10-15
	7-10	Sandy clay loam	SC, CL	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	10-15	Sandy clay loam	SC, CL	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	15-22	Fine sandy loam	SC, CL	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	22-35	Fine sandy loam	SC, CL	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	35-40	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-60	25-40
	40-54	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-60	25-40
	54-63	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-60	25-40
	63-72	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-60	25-40
	72-80	Clay loam	SC, CL	A-6	0	0	100	100	75-90	45-60	25-35	10-15
Carbika-----	0-11	Silt loam	SC-SM, SM	A-2-4, A-4	0	0	100	100	90-100	30-45	20-30	1-7
	11-15	Clay	CH, CL	A-7-6	0	0	100	100	90-100	85-99	45-55	30-35
	15-22	Clay loam	CH, CL	A-7-6	0	0	100	100	90-100	85-99	45-55	30-35
	22-34	Clay loam	CL, SC	A-4, A-6	0	0	100	100	85-100	45-60	30-35	10-15
	34-41	Clay loam	CL, SC	A-4, A-6	0	0	100	100	85-100	45-60	30-35	10-15
	41-60	Clay loam	CL, SC	A-4, A-6	0	0	100	100	85-100	45-60	30-35	10-15
	60-80	Clay loam	CL, SC	A-4, A-6	0	0	100	100	85-100	45-60	30-35	10-15
1357: Carway-----	0-7	Loamy fine sand	SM, SC-SM	A-2-4	0	0	100	100	85-100	15-30	10-20	NP-5
	7-10	Sandy clay loam	SC, CL	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	10-15	Sandy clay loam	SC, CL	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	15-22	Fine sandy loam	SC, CL	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	22-35	Fine sandy loam	SC, CL	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	35-40	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-60	25-40
	40-54	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-60	25-40
	54-63	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-60	25-40
	63-72	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-60	25-40
	72-80	Clay loam	SC, CL	A-6	0	0	100	100	75-90	45-60	25-35	10-15
Dillhut-----	0-10	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	80-100	5-15	0-0	NP
	10-29	Fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	80-100	5-15	0-0	NP
	29-35	Fine sandy loam	CL, SC	A-6	0	0	100	100	80-100	40-55	30-40	10-20
	35-43	Fine sandy loam	CL, SC	A-6	0	0	100	100	80-100	40-55	30-40	10-20
	43-54	Clay loam	CL	A-7-6	0	0	100	100	90-100	70-100	40-50	20-25
	54-66	Clay loam	CL	A-7-6	0	0	100	100	90-100	70-100	40-50	20-25
	66-80	Clay loam	CL	A-7-6	0	0	100	100	90-100	70-100	40-50	20-25
Solvay-----	0-5	Loamy fine sand	CL-ML, SC, SC-SM, SM	A-2-4, A-4	0	0	100	100	80-100	25-49	20-30	3-10
	5-14	Fine sandy loam	CL, SC	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	14-23	Fine sandy loam	CL, SC	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	23-37	Fine sandy loam	CL, SC	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	37-58	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-4	0	0	100	100	55-100	20-52	20-30	5-10
	58-76	Loamy fine sand	SC, SC-SM, CL, CL-ML	A-4	0	0	100	100	55-100	20-52	20-30	5-10
	76-80	Loamy fine sand	CL, CL-ML, SC, SC-SM	A-4	0	0	100	100	55-100	20-52	20-30	5-10
1359: Clark-----	0-11	Loam	CL, CL-ML	A-4, A-6	0	0	100	95-100	80-95	60-75	25-35	5-15
	11-16	Loam	CL	A-6	0	0	100	95-100	80-100	50-80	30-40	10-20
	16-28	Loam	CL, CL-ML	A-4	0	0	100	95-100	80-100	50-80	30-40	10-20
	28-45	Fine sandy loam	CL, CL-ML	A-4	0	0	100	95-100	80-100	50-80	30-40	10-20
	45-65	Fine sandy loam	CL, CL-ML	A-4	0	0	100	95-100	80-100	50-80	30-40	10-20
	65-80	Very fine sandy loam	CL, CL-ML	A-4	0	0	100	95-100	80-100	50-80	30-40	10-20
Ost-----	0-8	Loam	CL, CL-ML	A-6, A-4	0	0	95-100	95-100	85-95	60-75	20-35	5-15
	8-12	Loam	CL	A-6, A-7	0	0	95-100	90-100	85-100	60-80	30-45	10-20
	12-18	Loam	CL	A-6, A-7	0	0	95-100	90-100	85-100	60-80	30-45	10-20
	18-23	Clay loam	CL, SC	A-6, A-7	0	0	95-100	90-100	80-100	35-80	30-45	10-20
	23-38	Clay loam	CL, SC, SC-SM, CL-ML, ML, SM	A-2, A-4, A-6	0	0	85-100	85-100	60-100	30-80	20-40	5-20
	38-54	Loam	CL, SC, SC-SM, CL-ML, ML, SM	A-2, A-4, A-6	0	0	85-100	85-100	60-100	30-80	20-40	5-20
	54-80	Loam	CL, SC, SC-SM, CL-ML, ML, SM	A-2, A-4, A-6	0	0	85-100	85-100	60-100	30-80	20-40	5-20
1428: Crete-----	0-5	Silt loam	CL, ML	A-4, A-6	0	0	100	100	100	90-100	30-40	5-15
	5-9	Silty clay loam	CL	A-6, A-7	0	0	100	100	100	90-100	35-50	15-30
	9-19	Silty clay loam	CH	A-7	0	0	100	100	100	90-100	50-65	25-40
	19-27	Silty clay	CH	A-7	0	0	100	100	100	90-100	50-65	25-40
	27-38	Silty clay	CH	A-7	0	0	100	100	100	90-100	50-65	25-40
	38-48	Silty clay loam	CH, CL	A-6, A-7	0	0	100	100	100	95-100	30-55	10-35
	48-80	Silty clay loam	CH, CL	A-6, A-7	0	0	100	100	100	95-100	30-55	10-35
1429: Crete-----	0-5	Silt loam	CL, ML	A-4, A-6	0	0	100	100	100	90-100	30-40	5-15
	5-9	Silty clay loam	CL	A-6, A-7	0	0	100	100	100	90-100	35-50	15-30
	9-19	Silty clay	CH	A-7	0	0	100	100	100	90-100	50-65	25-40
	19-27	Silty clay	CH	A-7	0	0	100	100	100	90-100	50-65	25-40
	27-38	Silty clay	CH	A-7	0	0	100	100	100	90-100	50-65	25-40
	38-48	Silty clay loam	CH, CL	A-6, A-7	0	0	100	100	100	95-100	30-55	10-35
	48-80	Silt loam	CH, CL	A-6, A-7	0	0	100	100	100	95-100	30-55	10-35



ENGINEERING INDEX PROPERTIES--Continued  
Reno County, Kansas

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1553: Darlow-----	0-5	Loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-95	53-75	21-30	4-11
	5-8	Loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-95	53-75	21-30	4-11
	8-14	Loam	CL	A-6	0	0	100	100	90-100	60-80	30-39	11-18
	14-20	Clay loam	CL	A-6	0	0	100	100	90-100	60-80	30-39	11-18
	20-26	Loam	CL	A-6	0	0	100	100	90-100	60-80	30-39	11-18
	26-33	Loam	CL	A-6, A-7-6	0	0	100	100	90-100	55-80	30-44	11-22
	33-44	Loam	CL	A-6, A-7-6	0	0	100	100	90-100	55-80	30-44	11-22
	44-53	Loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0	100	100	90-100	40-52	23-37	6-16
	53-68	Loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0	100	100	90-100	40-52	23-37	6-16
Elmer-----	68-80	Sandy loam	SC-SM, SM	A-2	0	0	100	99-100	80-90	16-32	10-18	NP-5
	0-6	Fine sandy loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	50-60	20-30	3-10
	6-9	Fine sandy loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	50-60	20-30	3-10
	9-19	Fine sandy loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	50-60	20-30	3-10
	19-26	Fine sandy loam	CL, SC	A-6	0	0	100	98-100	90-100	45-60	25-35	10-20
	26-37	Fine sandy loam	CL, SC	A-6	0	0	100	98-100	90-100	45-60	25-35	10-20
	37-43	Loam	CL	A-6, A-7-6	0	0	99-100	98-100	90-100	65-85	30-45	15-25
	43-51	Clay loam	CL	A-6, A-7-6	0	0	99-100	98-100	90-100	65-85	30-45	15-25
	51-61	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-2-4, A-2-6, A-4, A-6	0	0	98-100	97-100	85-95	34-55	20-30	6-16
	61-72	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-2-4, A-2-6, A-4, A-6	0	0	98-100	97-100	85-95	34-55	20-30	6-16
	72-80	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-2-4, A-2-6, A-4, A-6	0	0	98-100	97-100	85-95	34-55	20-30	6-16
1554: Dillhut-----	0-10	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	80-100	5-15	0-0	NP
	10-29	Fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	80-100	5-15	0-0	NP
	29-35	Fine sandy loam	CL, SC	A-6	0	0	100	100	80-100	40-55	30-40	10-20
	35-43	Fine sandy loam	CL, SC	A-6	0	0	100	100	80-100	40-55	30-40	10-20
	43-54	Clay loam	CL	A-7-6	0	0	100	100	90-100	70-100	40-50	20-25
	54-66	Clay loam	CL	A-7-6	0	0	100	100	90-100	70-100	40-50	20-25
	66-80	Clay loam	CL	A-7-6	0	0	100	100	90-100	70-100	40-50	20-25
1555: Dillhut-----	0-4	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	80-100	5-15	0-0	NP
	4-9	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	80-100	5-15	0-0	NP
	9-18	Fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	80-100	5-15	0-0	NP
	18-26	Fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	80-100	5-15	0-0	NP
	26-41	Fine sandy loam	CL, SC, SC-SM	A-6	0	0	100	100	80-100	36-55	30-40	10-20
	41-55	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0	0	100	100	80-95	30-55	26-32	7-11
	55-65	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0	0	100	100	80-95	30-55	26-32	7-11
	65-70	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0	0	100	100	80-95	30-55	26-32	7-11
	70-80	Fine sandy loam	SC, SC-SM, SM, SP-SC, SP-SM	A-2-4	0	0	100	100	50-70	5-25	22-30	NP-10
Plev-----	0-4	Loamy fine sand	SP-SM	A-2-4, A-3	0	0	100	100	80-100	5-10	0-19	NP-3
	4-12	Fine sand	SP-SM	A-3	0	0	100	100	80-100	5-10	0-0	NP
	12-35	Fine sand	SP-SM	A-3	0	0	100	100	80-100	5-10	0-0	NP
	35-46	Fine sand	SP-SM	A-3	0	0	100	100	80-100	5-10	0-0	NP
	46-57	Fine sandy loam	SC, SC-SM	A-2-4, A-2-6, A-4, A-6	0	0	100	100	80-95	30-45	20-35	5-15
	57-75	Fine sandy loam	SC, SC-SM	A-2-4, A-2-6, A-4, A-6	0	0	100	100	80-95	30-45	20-35	5-15
	75-80	Loamy fine sand	SP-SM	A-2-4, A-3	0	0	100	100	50-70	5-10	0-0	NP
1556: Dillhut-----	0-4	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	80-100	5-15	0-0	NP
	4-9	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	80-100	5-15	0-0	NP
	9-18	Fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	80-100	5-15	0-0	NP
	18-26	Fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	80-100	5-15	0-0	NP
	26-41	Fine sandy loam	CL, SC, SC-SM	A-6	0	0	100	100	80-100	36-55	30-40	10-20
	41-55	Fine sandy loam	CL-ML, SC, SC-SM, CL	A-2, A-4, A-6	0	0	100	100	80-95	30-55	26-32	7-11
	55-65	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0	0	100	100	80-95	30-55	26-32	7-11
	65-70	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0	0	100	100	80-95	30-55	26-32	7-11
	70-80	Fine sandy loam	SC, SC-SM, SM, SP-SC, SP-SM	A-2-4	0	0	100	100	50-70	5-25	22-30	NP-10
Solvay-----	0-5	Fine sandy loam	CL-ML, SC, SC-SM, SM	A-2-4, A-4	0	0	100	100	80-100	25-49	20-30	3-10
	5-14	Fine sandy loam	CL, SC	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	14-23	Fine sandy loam	CL, SC	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	23-37	Fine sandy loam	CL, SC	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	37-58	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-4	0	0	100	100	55-100	20-52	20-30	5-10
	58-76	Loamy fine sand	CL, CL-ML, SC, SC-SM	A-4	0	0	100	100	55-100	20-52	20-30	5-10
	76-80	Loamy fine sand	CL, CL-ML, SC, SC-SM	A-4	0	0	100	100	55-100	20-52	20-30	5-10



ENGINEERING INDEX PROPERTIES--Continued  
Reno County, Kansas

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Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index	
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200			
	In				Pct	Pct					Pct		
1725: Farnum-----	0-5	Loam	CL-ML, CL	A-4, A-6	0	0	100	100	90-100	60-85	20-35	5-15	
	5-15	Loam	CL-ML, CL	A-4, A-6	0	0	100	100	90-100	60-85	20-35	5-15	
	15-21	Loam	CL	A-6	0	0	100	100	85-100	60-80	30-40	10-15	
	21-34	Sandy clay loam	SC, CL	A-6, A-7-6	0	0	100	100	70-100	45-80	35-50	15-30	
	34-48	Loam	SC, CL	A-6, A-7-6	0	0	100	100	70-100	45-80	35-50	15-30	
	48-61	Clay loam	SC, CL	A-6, A-7-6	0	0	100	100	70-100	45-80	35-50	15-30	
	61-73	Clay loam	SC, CL	A-6, A-7-6	0	0	100	100	70-100	45-80	35-50	15-30	
	73-80	Loam	SC, CL, SC- SM, CL-ML	A-2, A-4, A-6	0	0	100	95-100	65-100	30-80	20-35	5-15	
	Funmar-----	0-6	Loam	CL-ML, CL	A-4, A-6	0	0	100	100	85-100	60-85	25-35	5-15
6-12		Loam	CL-ML, CL	A-4, A-6	0	0	100	100	85-100	60-85	25-35	5-15	
12-17		Loam	CL, ML	A-6, A-4, A- 7-6	0	0	100	100	85-100	60-80	30-45	7-20	
17-26		Clay loam	CL, ML	A-6, A-4, A- 7-6	0	0	100	100	85-100	60-80	30-45	7-20	
26-32		Loam	CL, ML	A-6, A-4, A- 7-6	0	0	100	100	85-100	60-80	30-45	7-20	
32-38		Silty clay loam	CL	A-6, A-7-6	0	0	100	100	90-100	75-100	40-50	20-30	
38-54		Silty clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-100	45-60	25-35	
54-66		Silty clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-100	45-60	25-35	
66-80		Silty clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-100	45-60	25-35	
1727: Funmar-----	0-6	Loam	CL-ML, CL	A-4, A-6	0	0	100	100	85-100	60-85	25-35	5-15	
	6-12	Loam	CL-ML, CL	A-4, A-6	0	0	100	100	85-100	60-85	25-35	5-15	
	12-17	Loam	CL, ML	A-6, A-4, A- 7-6	0	0	100	100	85-100	60-80	30-45	7-20	
	17-26	Clay loam	CL, ML	A-6, A-4, A- 7-6	0	0	100	100	85-100	60-80	30-45	7-20	
	26-32	Loam	CL, ML	A-6, A-4, A- 7-6	0	0	100	100	85-100	60-80	30-45	7-20	
	32-38	Silty clay loam	CL	A-6, A-7-6	0	0	100	100	90-100	75-100	40-50	20-30	
	38-54	Silty clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-100	45-60	25-35	
	54-66	Silty clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-100	45-60	25-35	
	66-80	Silty clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-100	45-60	25-35	
Taver-----	0-7	Loam	CL	A-4, A-6	0	0	100	100	96-100	65-85	28-34	9-14	
	7-17	Silty clay loam	CH, CL	A-7-6	0	0	100	100	96-100	90-99	48-60	30-40	
	17-33	Silty clay	CH, CL	A-7-6	0	0	100	100	96-100	90-99	48-60	30-40	
	33-53	Silty clay loam	CH, CL	A-7-6	0	0	100	100	96-100	90-99	48-60	30-40	
	53-64	Clay loam	CL	A-4, A-6	0	0	100	100	90-100	60-80	30-40	15-20	
	64-80	Sandy clay loam	CL	A-4, A-6	0	0	100	100	90-100	60-80	30-40	15-20	
	1804: Geary-----	0-6	Silt loam	CL	A-6	0	0	100	100	95-100	85-95	35-40	15-20
		6-14	Silt loam	CL	A-6, A-7	0	0	100	100	90-100	80-100	25-45	10-20
		14-25	Silty clay loam	CL	A-7, A-6	0	0	100	100	90-100	70-95	25-45	15-25
25-37		Silty clay loam	CL	A-7, A-6	0	0	100	100	90-100	70-95	25-45	15-25	
37-51		Silty clay loam	CL	A-7, A-6	0	0	100	100	90-100	70-95	25-45	15-25	
51-80		Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-100	25-45	10-20	
1807: Geary, Moderately Eroded-----	0-5	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	35-45	15-20	
	5-19	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	35-45	15-20	
	19-43	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	35-45	15-20	
1985: Hayes-----	43-50	Silt loam	CL	A-4, A-6	0	0	100	100	90-100	80-100	25-35	10-15	
	50-80	Silt loam	CL	A-4, A-6	0	0	100	100	90-100	80-100	25-35	10-15	
	0-8	Fine sandy loam	SC-SM	A-2-4, A-4	0	0	100	100	80-95	30-49	20-25	4-7	
	8-14	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10	
	14-23	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-4, A-2-4	0	0	100	100	80-95	30-55	21-28	3-10	
	23-34	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10	
	34-42	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10	
	42-47	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10	
	47-56	Sandy clay loam	CL	A-6	0	0	100	100	80-100	60-85	30-35	11-15	
56-69	Silty clay	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35		
69-80	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35		



ENGINEERING INDEX PROPERTIES--Continued  
Reno County, Kansas

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Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct					Pct	
1986: Hayes-----	In											
	0-8	Loamy fine sand	SM	A-2	0	0	100	100	75-95	15-30	0-0	NP
	8-14	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	14-23	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	23-34	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	34-42	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	42-47	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	47-56	Sandy clay loam	CL	A-6	0	0	100	100	80-100	60-85	30-35	11-15
	56-69	Silty clay	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
	69-80	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
Solvay-----	0-5	Loamy fine sand	SC-SM, SM	A-2-4	0	0	100	100	85-100	15-30	10-20	NP-5
	5-14	Fine sandy loam	CL, SC	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	14-23	Fine sandy loam	CL, SC	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	23-37	Fine sandy loam	CL, SC	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	37-58	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-4	0	0	100	100	55-100	20-52	20-30	5-10
	58-76	Loamy fine sand	CL, CL-ML, SC, SC-SM	A-4	0	0	100	100	55-100	20-52	20-30	5-10
	76-80	Loamy fine sand	CL, CL-ML, SC, SC-SM	A-4	0	0	100	100	55-100	20-52	20-30	5-10
1987: Hayes-----	0-8	Loamy fine sand	SM	A-2	0	0	100	100	75-95	15-30	0-0	NP
	8-14	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	14-23	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	23-34	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	34-42	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	42-47	Fine sandy loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	21-28	3-10
	47-56	Sandy clay loam	CL	A-6	0	0	100	100	80-100	60-85	30-35	11-15
	56-69	Silty clay	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
	69-80	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
Turon-----	0-8	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	80-100	5-25	0-0	NP
	8-28	Loamy fine sand	SM, SP-SM	A-2-4	0	0	100	100	80-100	10-25	0-20	NP-3
	28-40	Stratified loamy fine sand to fine sandy loam	SC-SM, SM, SP-SM, SP-SC	A-2-4	0	0	100	100	80-100	10-30	0-23	NP-6
	40-58	Silty clay	CH, CL	A-6, A-7-6	0	0	100	100	80-100	80-99	36-52	16-25
	58-75	Silty clay	CH, CL	A-6, A-7-6	0	0	100	100	80-100	80-99	36-52	16-25
	75-80	Silty clay	CH, CL	A-6, A-7-6	0	0	100	100	80-100	80-99	36-52	16-25
2204: Jamash-----	0-4	Clay loam	CL	A-7-5, A-7-6	0	0	100	100	96-100	75-98	40-50	15-25
	4-11	Silty clay loam	CL, CH	A-6, A-7	0	0	100	100	96-100	75-98	45-55	20-30
	11-15	Silty clay loam	CL	A-6, A-7	0	0	100	100	96-100	80-99	40-50	15-25
	15-28	Weathered bedrock			---	---	---	---	---	---	---	---
	28-80	Weathered bedrock			---	---	---	---	---	---	---	---
Piedmont-----	0-4	Clay loam	CL	A-6, A-7	0	0	100	100	96-100	75-98	31-43	10-20
	4-7	Clay loam	CL	A-6, A-7	0	0	100	100	96-100	75-98	31-43	10-20
	7-13	Clay	CL	A-6, A-7	0	0	100	100	96-100	75-98	31-50	13-26
	13-20	Clay	CL	A-6, A-7	0	0	100	100	96-100	75-98	31-50	13-26
	20-24	Silty clay	CH, CL	A-6, A-7	0	0	100	100	96-100	80-99	37-60	15-34
	24-32	Silty clay	CH, CL, GC, SC	A-6, A-7	0	0	50-100	50-100	45-100	45-99	37-60	15-34
	32-80	Weathered bedrock			---	---	---	---	---	---	---	---
2205: Jamash-----	0-4	Clay loam	CL	A-7-5, A-7-6	0	0	100	100	96-100	75-98	40-50	15-25
	4-11	Silty clay loam	CL, CH	A-6, A-7	0	0	100	100	96-100	75-98	45-55	20-30
	11-15	Silty clay loam	CL	A-6, A-7	0	0	100	100	96-100	80-99	40-50	15-25
	15-28	Weathered bedrock			---	---	---	---	---	---	---	---
	28-80	Weathered bedrock			---	---	---	---	---	---	---	---
Piedmont-----	0-4	Clay loam	CL	A-6, A-7	0	0	100	100	96-100	75-98	31-43	10-20
	4-7	Clay loam	CL	A-6, A-7	0	0	100	100	96-100	75-98	31-43	10-20
	7-13	Clay	CL	A-6, A-7	0	0	100	100	96-100	75-98	31-50	13-26
	13-20	Clay	CL	A-6, A-7	0	0	100	100	96-100	75-98	31-50	13-26
	20-24	Silty clay	CH, CL	A-6, A-7	0	0	100	100	96-100	80-99	37-60	15-34
	24-32	Silty clay	CH, CL, GC, SC	A-6, A-7	0	0	50-100	50-100	45-100	45-99	37-60	15-34
	32-80	Weathered bedrock			---	---	---	---	---	---	---	---



ENGINEERING INDEX PROPERTIES--Continued  
Reno County, Kansas

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index	
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200			
	In				Pct	Pct					Pct		
2206: Jamash-----	0-4	Clay loam	CL	A-7-5, A-7-6	0	0	100	100	96-100	75-98	40-50	15-25	
	4-11	Silty clay loam	CL, CH	A-6, A-7	0	0	100	100	96-100	75-98	45-55	20-30	
	11-15	Silty clay loam	CL	A-6, A-7	0	0	100	100	96-100	80-99	40-50	15-25	
	15-28	Weathered bedrock			---	---	---	---	---	---	---	---	
	28-80	Weathered bedrock			---	---	---	---	---	---	---	---	
Piedmont-----	0-4	Clay loam	CL	A-6, A-7	0	0	100	100	96-100	75-98	31-43	10-20	
	4-7	Clay loam	CL	A-6, A-7	0	0	100	100	96-100	75-98	31-43	10-20	
	7-13	Clay	CL	A-6, A-7	0	0	100	100	96-100	75-98	31-50	13-26	
	13-20	Clay	CL	A-6, A-7	0	0	100	100	96-100	75-98	31-50	13-26	
	20-24	Silty clay	CH, CL	A-6, A-7	0	0	100	100	96-100	80-99	37-60	15-34	
	24-32	Silty clay	SC, CH, CL, GC	A-6, A-7	0	0	50-100	50-100	45-100	45-99	37-60	15-34	
	32-80	Weathered bedrock			---	---	---	---	---	---	---	---	
	2207: Jamash-----	0-4	Clay loam	CL	A-7-5, A-7-6	0	0	100	100	96-100	75-98	40-50	15-25
4-11	Silty clay loam	CL, CH	A-6, A-7	0	0	100	100	96-100	75-98	45-55	20-30		
11-15	Silty clay loam	CL	A-6, A-7	0	0	100	100	96-100	80-99	40-50	15-25		
15-28	Weathered bedrock			---	---	---	---	---	---	---	---		
28-80	Weathered bedrock			---	---	---	---	---	---	---	---		
2381: Kanza-----	0-4	Sandy loam	SM, SC, SC-SM	A-2, A-4	0	0	95-100	90-100	70-100	10-40	0-25	NP-10	
	4-9	Loamy fine sand	SC, SC-SM, SM	A-2, A-4	0	0	95-100	90-100	70-100	10-40	0-25	NP-10	
	9-17	Loamy fine sand	SM, SC, SC-SM	A-2, A-4	0	0	95-100	90-100	50-85	10-30	0-25	NP-10	
	17-33	Loamy fine sand	SM, SC-SM, SP-SM, SP-SC	A-2, A-3, A-4	0	0	90-100	85-100	65-100	5-25	0-20	NP-5	
33-80	Sand	SM, SC-SM, SP-SM, SP-SC	A-2, A-3, A-4	0	0	90-100	85-100	65-100	5-25	0-20	NP-5		
Ninnescah-----	0-6	Sandy loam	SC, SC-SM, SM	A-2-4, A-2-6, A-4, A-6	0	0	100	100	70-100	20-49	15-34	NP-15	
	6-14	Sandy loam	SC, SC-SM, SM	A-2-4, A-2-6, A-4, A-6	0	0	100	100	70-100	20-49	15-34	NP-15	
	14-19	Sandy loam	SC, SC-SM, SM	A-6, A-2-4, A-4 A-2-6, A-4	0	0	100	100	70-100	20-49	15-34	NP-15	
	19-30	Sandy loam	SC, SC-SM, SM	A-2-4, A-4	0	0	100	95-100	70-100	30-49	15-26	NP-10	
	30-37	Sandy loam	SC, SC-SM, SM	A-2-4, A-4	0	0	100	95-100	70-100	30-49	15-26	NP-10	
	37-52	Sandy loam	SC-SM, SM, SP-SM, SP-SC	A-2-4, A-3	0	0	100	90-100	60-90	5-35	0-20	NP-6	
	52-80	Loamy sand	SM, SC-SM, SP-SM, SP-SC	A-2-4, A-3	0	0	100	90-100	60-90	5-35	0-20	NP-6	
2390: Kaskan-----	0-7	Loam	CL	A-6	0	0	100	100	95-100	85-100	30-35	10-15	
	7-17	Clay loam	CL	A-6, A-7	0	0	100	100	100	85-100	35-45	15-20	
	17-24	Loam	CL	A-6	0	0	100	100	80-95	60-80	30-35	10-15	
	24-35	Fine sandy loam	SC, SC-SM	A-2-4, A-4	0	0	100	100	70-85	30-45	20-30	5-10	
	35-41	Loamy fine sand	SM	A-2-4	0	0	100	95-100	65-85	15-30	0-0	NP	
	41-47	Fine sand	SM	A-2-4	0	0	100	95-100	65-85	15-30	0-0	NP	
	47-66	Sand	SM	A-2-4	0	0	100	95-100	65-85	15-30	0-0	NP	
	66-80	Stratified gravelly coarse sand to sand	SP, SP-SM	A-1-b, A-2-4, A-3	0	0	95-100	75-95	35-55	1-10	0-0	NP	
	2391: Kaskan-----	0-9	Silty clay loam	CL	A-6, A-7	0	0	100	100	100	85-100	35-45	15-20
	9-13	Silty clay loam	CL	A-6, A-7	0	0	100	100	100	85-100	35-45	15-20	
13-17	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-4	0	0	100	100	75-95	40-65	20-30	5-10		
17-21	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-4	0	0	100	100	75-95	40-65	20-30	5-10		
21-27	Fine sandy loam	SC-SM, CL, CL-ML, SC	A-4	0	0	100	100	75-95	40-65	20-30	5-10		
27-43	Stratified fine sand to loamy fine sand	SM	A-2-4	0	0	100	95-100	65-85	15-30	0-0	NP		
43-57	Stratified fine sand to fine sandy loam	SC-SM, SM	A-2-4, A-4	0	0	100	95-100	70-85	30-45	0-20	NP-5		
57-80	Stratified fine sand to fine sandy loam	SC-SM, SM	A-2-4, A-4	0	0	100	95-100	70-85	30-45	0-20	NP-5		



ENGINEERING INDEX PROPERTIES--Continued  
Reno County, Kansas

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Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index	
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200			
	In				Pct	Pct					Pct		
2395: Kisiwa-----	0-4	Loam	CL	A-4, A-6	0	0	100	100	85-96	60-75	30-35	10-15	
	4-7	Loam	CL	A-6, A-7	0	0	100	100	85-96	60-75	30-35	10-15	
	7-14	Clay loam	CL	A-7-6, A-6	0	0	100	95-100	90-100	65-95	35-45	15-20	
	14-23	Clay loam	CL	A-7-6, A-6	0	0	100	95-100	90-100	65-95	35-45	15-20	
	23-31	Clay	CL, CH	A-7-6, A-6	0	0	100	95-100	90-100	70-80	35-55	15-30	
	31-40	Clay	CL, CH	A-7-6, A-6	0	0	100	95-100	90-100	70-80	35-55	15-30	
	40-46	Loam	CL, CH	A-7-6, A-6	0	0	94-100	90-100	85-100	55-80	35-55	15-30	
	46-52	Fine sandy loam	SM, SC, SC-SM	A-4	0	0	85-100	82-100	60-95	40-50	0-30	NP-10	
	52-58	Fine sandy loam	SM, SC, SC-SM	A-4	0	0	89-100	80-100	60-95	40-50	0-30	NP-10	
	58-65	Stratified coarse sand to fine sandy loam	SM, SC, SC-SM	A-2-4	0	0	100	95-100	50-90	15-60	0-25	NP-10	
	65-80	Stratified coarse sand	SM, SC, SC-SM	A-2-4	0	0	100	100	50-70	15-30	0-25	NP-10	
	2509: Ladysmith-----	0-8	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	30-45	15-25
		8-21	Silty clay	CH	A-7-6	0	0	100	100	95-100	85-95	50-70	30-50
21-31		Silty clay	CH	A-7-6	0	0	100	100	95-100	85-95	50-70	30-50	
31-45		Silty clay	CL, CH	A-7-6	0	0	100	100	95-100	85-95	40-65	25-45	
45-80		Silty clay loam	CL, CH	A-7-6	0	0	100	100	95-100	85-95	40-65	25-45	
2556: Langdon-----	0-8	Fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	80-100	5-25	0-0	NP	
	8-47	Stratified sand to loamy sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	80-100	5-25	0-0	NP	
	47-64	Fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	80-100	5-20	0-0	NP	
	64-80	Stratified sand to loamy sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	80-100	5-25	0-0	NP	
2587: Imano-----	0-10	Clay loam	CL	A-7-6, A-6	0	0	100	100	90-100	70-80	35-45	15-22	
	10-25	Loam	CL	A-4, A-6, A-7-6	0	0	100	100	85-100	60-80	25-45	7-22	
	25-55	Stratified fine sand to sand	SP, SP-SM	A-1, A-2, A-3, A-4	0	0	100	95-100	30-55	0-10	0-10	NP	
	55-80	Coarse sand	SP-SM, SP	A-1, A-2, A-3, A-4	0	0	100	95-100	30-55	0-5	0-10	NP	
2588: Longford, Moderately Eroded-----	0-6	Silty clay loam	CL	A-7	0	0	100	95-100	90-100	85-95	45-50	25-30	
	6-11	Silty clay loam	CL	A-7	0	0	100	95-100	90-100	85-95	45-50	25-30	
	11-28	Silty clay	CH	A-7-6	0	0	100	95-100	85-100	75-95	50-60	30-40	
	28-43	Silty clay	CH	A-7-6	0	0	100	95-100	85-100	75-95	50-60	30-40	
	43-60	Silty clay loam	CL	A-7	0	0	100	95-100	85-100	75-95	45-50	25-30	
	60-80	Silty clay loam	CL	A-7	0	0	100	95-100	85-100	75-95	45-50	25-30	
2812: Mahone-----	0-8	Loamy fine sand	SC-SM, SM	A-2-4, A-4	0	0	100	100	75-95	25-45	0-20	NP-5	
	8-14	Fine sandy loam	SC-SM, SM	A-2-4, A-4	0	0	100	100	75-95	25-45	0-20	NP-5	
	14-20	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-4	0	0	100	90-100	75-95	45-65	20-30	5-10	
	20-25	Very fine sandy loam	CL, CL-ML, SC, SC-SM	A-4	0	0	100	90-100	75-95	45-65	20-30	5-10	
	25-33	Silt loam	CL, CL-ML, SC, SC-SM	A-4	0	0	100	90-100	75-95	45-65	20-30	5-10	
	33-39	Stratified silt loam to fine sandy loam	CL, CL-ML, SC, SC-SM	A-4	0	0	100	90-100	75-95	45-65	20-30	5-10	
	39-42	Clay loam	CL	A-6, A-7-6	0	0	100	100	98-100	85-95	30-45	10-25	
	42-48	Fine sandy loam	CL	A-7-6, A-6, A-4	0	0	100	100	98-100	85-95	30-45	10-25	
	48-54	Very fine sandy loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0	100	95-100	65-100	40-90	20-35	5-20	
	54-61	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0	100	95-100	65-100	40-90	20-35	5-20	
	61-66	Fine sandy loam	CL-ML, SC, SC-SM, CL	A-4, A-6	0	0	100	95-100	65-100	40-90	20-35	5-20	
	66-71	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0	100	95-100	65-100	40-90	20-35	5-20	
	71-78	Loamy fine sand	SP-SM, SP	A-1-b, A-3, A-2-4	0	0	99-100	85-100	35-75	1-10	0-0	NP	
	78-80	Coarse sand	SP-SM, SP	A-1-b, A-3	0	0	99-100	85-100	35-75	1-10	0-0	NP	



ENGINEERING INDEX PROPERTIES--Continued  
Reno County, Kansas

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Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
2948: Nalim-----	0-6	Loam	CL-ML, CL	A-4, A-6	0	0	95-100	95-100	95-100	65-85	20-35	5-15
	6-9	Loam	CL-ML, CL	A-4, A-6	0	0	95-100	95-100	95-100	65-85	20-35	5-15
	9-13	Clay loam	SC, CL, SM, ML	A-6, A-7-6	0	0	95-100	95-100	65-100	45-80	35-55	11-25
	13-21	Clay loam	SC, CL, SM, ML	A-7-6, A-6	0	0	95-100	95-100	65-100	45-80	35-55	11-25
	21-31	Clay loam	SC, CL, SM, ML	A-6, A-7-6	0	0	95-100	95-100	65-100	45-80	35-55	11-25
	31-39	Sandy clay loam	SC, CL	A-6, A-4, A- 2-6	0	0	95-100	95-100	65-100	30-80	25-40	10-20
	39-44	Gravelly sandy clay loam	SC, CL	A-6, A-4, A- 2-6	0	0	95-100	95-100	65-100	30-80	25-40	10-20
	44-52	Sandy clay loam	SC, CL	A-2, A-4, A-6	0	0	95-100	95-100	60-90	15-70	25-40	10-20
	52-62	Loamy coarse sand	SC, SC-SM, SM	A-1-b, A-2	0	0	85-100	75-90	40-70	15-30	0-25	NP-10
	62-72	Gravelly loamy coarse sand	GM, GP-GM, SM, SP-SM, SP-SC, GP- GC, SC-SM, GC-GM	A-3, A-1, A-2	0	0	40-100	35-85	30-70	5-30	0-20	NP-5
	72-80	Stratified sand to gravelly loamy coarse sand	GM, GP-GM, SM, SP-SM, GC-GM, SC- SM, GP-GC, SP-SC	A-3, A-1, A-2	0	0	40-100	35-85	30-70	5-30	0-20	NP-5
2949: Naron, Moderately Eroded-----	0-8	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	100	100	60-85	30-55	0-25	NP-7
	8-28	Sandy clay loam	CL, SC	A-6	0	0	100	100	60-90	35-55	30-35	10-15
	28-39	Sandy clay loam	CL, SC	A-6	0	0	100	100	60-90	35-55	30-35	10-15
	39-55	Sandy clay loam	CL, SC	A-6	0	0	100	100	60-90	35-55	30-35	10-15
	55-66	Fine sandy loam	SC, SC-SM, SM	A-2, A-4	0	0	100	100	60-90	20-50	0-25	NP-10
	66-80	Loamy fine sand	SC, SC-SM, SM	A-2, A-4	0	0	100	100	60-90	20-50	0-25	NP-10
2950: Naron, Moderately Eroded-----	0-8	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	100	100	60-85	30-55	0-25	NP-7
	8-28	Sandy clay loam	CL, SC	A-6	0	0	100	100	60-90	35-55	30-35	10-15
	28-39	Sandy clay loam	CL, SC	A-6	0	0	100	100	60-90	35-55	30-35	10-15
	39-55	Sandy clay loam	CL, SC	A-6	0	0	100	100	60-90	35-55	30-35	10-15
	55-66	Fine sandy loam	SC, SC-SM, SM	A-2, A-4	0	0	100	100	60-90	20-50	0-25	NP-10
	66-80	Loamy fine sand	SC, SC-SM, SM	A-2, A-4	0	0	100	100	60-90	20-50	0-25	NP-10
2951: Nash-----	0-8	Silt loam	ML, CL, CL-ML	A-4	0	0	100	100	96-100	65-97	22-31	2-10
	8-19	Silt loam	ML, CL, CL-ML	A-4	0	0	100	100	94-100	51-97	0-31	NP-10
	19-28	Silt loam	ML, CL, CL-ML	A-4	0	0	100	100	94-100	51-97	0-31	NP-10
	28-80	Weathered bedrock	ML, CL, CL-ML	A-4	---	---	---	---	---	---	---	---
2952: Nash-----	0-8	Silt loam	ML, CL, CL-ML	A-4	0	0	100	100	96-100	65-97	22-31	2-10
	8-19	Silt loam	ML, CL, CL-ML	A-4	0	0	100	100	94-100	51-97	0-31	NP-10
	19-28	Silt loam	ML, CL, CL-ML	A-4	0	0	100	100	94-100	51-97	0-31	NP-10
	28-80	Weathered bedrock	ML, CL, CL-ML	A-4	---	---	---	---	---	---	---	---
Lucien-----	0-6	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	95-100	90-100	51-97	15-37	NP-14
	6-12	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	95-100	90-100	51-97	15-37	NP-14
	12-80	Weathered bedrock			---	---	---	---	---	---	---	---
2953: Nash, Moderatel Eroded-----	0-8	Silt loam	ML, CL, CL-ML	A-4	0	0	100	100	96-100	65-97	22-31	2-10
	8-19	Silt loam	ML, CL, CL-ML	A-4	0	0	100	100	94-100	51-97	0-31	NP-10
	19-28	Silt loam	ML, CL, CL-ML	A-4	0	0	100	100	94-100	51-97	0-31	NP-10
	28-80	Weathered bedrock			---	---	---	---	---	---	---	---
Lucien-----	0-6	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	95-100	90-100	51-97	15-37	NP-14
	6-12	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	95-100	90-100	51-97	15-37	NP-14
	12-80	Weathered bedrock			---	---	---	---	---	---	---	---
2955: Nickerson-----	0-6	Fine sandy loam	SM, SC-SM, SC	A-4	0	0	100	100	90-100	35-50	15-25	5-10
	6-12	Loamy fine sand	SM, SC, SC- SM, SP-SM	A-4, A-2-4	0	0	100	100	90-95	23-49	10-20	NP-5
	12-18	Fine sandy loam	SM, SC-SM, SC	A-2-4, A-4	0	0	100	100	90-100	33-65	15-25	5-10
	18-29	Sandy clay loam	SC-SM, CL-ML, CL, SC	A-4	0	0	100	100	65-95	40-50	20-30	5-10
	29-34	Loam	CL, CL-ML, SC-SM, SC	A-4	0	0	100	99-100	65-95	40-58	20-30	5-10
	34-38	Very fine sandy loam	SC, SC-SM, CL, CL-ML	A-4	0	0	99-100	95-100	65-91	40-58	15-25	5-10
	38-45	Loamy fine sand	SC-SM, SM	A-4, A-2-4	0	0	100	99-100	65-91	26-50	10-20	NP-5
	45-53	Fine sand	SP-SM, SC-SM, SM	A-2-4	0	0	100	100	65-80	40-50	0-20	NP-5
	53-57	Fine sand	SP-SM, SC-SM, SM	A-2-4	0	0	100	100	65-80	40-50	0-20	NP-5
	57-80	Sand	SC-SM, SM	A-4	0	0	100	100	65-80	40-50	0-20	NP-5



ENGINEERING INDEX PROPERTIES--Continued  
Reno County, Kansas

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Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index	
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200			
	In				Pct	Pct					Pct		
2956: Nickerson-----	0-6	Loamy fine sand	SM, SP-SM, SC-SM	A-2-4, A-4	0	0	100	100	80-95	10-30	5-15	NP-5	
	6-12	Loamy fine sand	SM, SC, SC- SM, SP-SM	A-4, A-2-4	0	0	100	100	90-95	23-49	5-15	NP-5	
	12-18	Fine sandy loam	SM, SC-SM, SC	A-4, A-2-4	0	0	100	100	90-100	33-65	15-25	5-10	
	18-29	Sandy clay loam	CL, SC, SC- SM, CL-ML	A-4	0	0	100	100	65-95	40-50	20-30	5-10	
	29-34	Loam	CL, CL-ML, SC, SC-SM	A-4	0	0	100	99-100	65-95	40-58	20-30	5-10	
	34-38	Very fine sandy loam	CL, CL-ML, SC, SC-SM	A-4	0	0	99-100	95-100	65-91	40-58	15-25	5-10	
	38-45	Loamy fine sand	SC-SM, SM	A-4, A-2-4	0	0	100	99-100	65-91	26-50	0-20	NP-5	
	45-53	Fine sand	SP-SM, SC-SM, SM	A-2-4	0	0	100	100	65-80	40-50	0-20	NP-5	
	53-57	Fine sand	SP-SM, SC-SM, SM	A-2-4	0	0	100	100	65-80	40-50	0-20	NP-5	
	57-80	Sand	SC-SM, SM	A-4	0	0	100	100	65-80	40-50	0-20	NP-5	
	2957: Nickerson-----	0-6	Fine sandy loam	SM, SC-SM, SC	A-4	0	0	100	100	90-100	35-50	15-25	5-10
		6-12	Loamy fine sand	SM, SC, SC- SM, SP-SM	A-4, A-2-4	0	0	100	100	90-95	23-49	10-20	NP-10
		12-18	Fine sandy loam	SM, SC-SM, SC	A-4, A-2-4	0	0	100	100	90-100	33-65	15-25	5-10
18-29		Sandy clay loam	CL, SC, SC- SM, CL-ML	A-4	0	0	100	100	65-95	40-50	20-30	5-10	
29-34		Loam	SC, CL-ML, SC-SM, CL	A-4	0	0	100	99-100	65-95	40-58	20-30	5-10	
34-38		Very fine sandy loam	CL-ML, SC-SM, CL, SC	A-4	0	0	99-100	95-100	65-91	40-58	15-25	5-10	
38-45		Loamy fine sand	SC-SM, SM	A-4, A-2-4	0	0	100	99-100	65-91	26-50	5-20	NP-10	
45-53		Fine sand	SP-SM, SC-SM, SM	A-2-4	0	0	100	100	65-80	40-50	0-20	NP-5	
53-57		Fine sand	SP-SM, SC-SM, SM	A-2-4	0	0	100	100	65-80	40-50	0-20	NP-5	
57-80		Sand	SC-SM, SM	A-4	0	0	100	100	65-80	40-50	0-20	NP-5	
Punkin-----		0-6	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	100	95-100	60-85	30-55	0-25	NP-7
		6-14	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	100	95-100	60-85	30-55	0-25	NP-7
		14-22	Clay loam	CH, CL	A-7	0	0	100	100	90-100	75-95	45-65	20-40
	22-32	Clay	CH, CL	A-7	0	0	100	100	90-100	75-95	45-65	20-40	
	32-41	Sandy clay loam	CL	A-4, A-6	0	0	100	100	80-100	60-85	30-35	10-15	
	41-51	Sandy clay loam	CL	A-4, A-6	0	0	100	100	80-100	60-85	30-35	10-15	
	51-63	Sand	SM	A-3	0	0	100	80-95	65-85	20-35	0-0	NP	
	63-80	Stratified coarse sand to sand	SP-SM	A-1-b, A-3	0	0	100	75-95	35-55	5-12	0-0	NP	
2958: Ninnescah-----	0-6	Fine sandy loam	SC, SC-SM, SM	A-2-6, A-4, A-6, A-2-4	0	0	100	100	70-100	20-49	15-34	NP-15	
	6-14	Sandy loam	SC, SC-SM, SM	A-2-4, A-2-6, A-4, A-6	0	0	100	100	70-100	20-49	15-34	NP-15	
	14-19	Sandy loam	SC, SC-SM, SM	A-2-4, A-2-6, A-4, A-6	0	0	100	100	70-100	20-49	15-34	NP-15	
	19-30	Sandy loam	SC, SC-SM, SM	A-2-4, A-4	0	0	100	95-100	70-100	30-49	15-26	NP-10	
	30-37	Sandy loam	SC, SC-SM, SM	A-2-4, A-4	0	0	100	95-100	70-100	30-49	15-26	NP-10	
	37-52	Sandy loam	SC-SM, SM, SP-SM	A-2-4, A-3	0	0	100	90-100	60-90	5-35	0-20	NP-6	
	52-80	Loamy sand	SC-SM, SM, SP-SM	A-2-4, A-3	0	0	100	90-100	60-90	5-35	0-20	NP-6	
2959: Ninnescah, saline-----	0-6	Fine sandy loam	SC, SC-SM, SM	A-2-4, A-2-6, A-4	0	0	100	100	70-100	20-49	15-34	NP-15	
	6-14	Sandy loam	SC, SC-SM, SM	A-2-4, A-2-6, A-4	0	0	100	100	70-100	20-49	15-34	NP-15	
	14-19	Sandy loam	SC, SC-SM, SM	A-2-4, A-2-6, A-4	0	0	100	100	70-100	20-49	15-34	NP-15	
	19-30	Sandy loam	SC, SC-SM, SM	A-2-4, A-4	0	0	100	95-100	70-100	30-49	15-26	NP-10	
	30-37	Sandy loam	SC, SC-SM, SM	A-2-4, A-4	0	0	100	95-100	70-100	30-49	15-26	NP-10	
	37-52	Loamy sand	SC-SM, SM, SP-SM	A-2-4, A-3	0	0	100	90-100	60-90	5-35	0-20	NP-6	
	52-80	Loamy sand	SC-SM, SM, SP-SM	A-2-4, A-3	0	0	100	90-100	60-90	5-35	0-20	NP-6	
3051: Ost-----	0-8	Loam	CL, CL-ML	A-6, A-4	0	0	95-100	95-100	85-95	60-75	20-35	5-15	
	8-12	Loam	CL	A-6, A-7	0	0	95-100	90-100	85-100	60-80	30-45	10-20	
	12-18	Loam	CL	A-6, A-7	0	0	95-100	90-100	85-100	60-80	30-45	10-20	
	18-23	Clay loam	CL, SC	A-6, A-7	0	0	95-100	90-100	80-100	35-80	30-45	10-20	
	23-38	Clay loam	CL, SC, SC- SM, CL-ML	A-2, A-4, A-6	0	0	85-100	85-100	60-100	30-80	20-40	5-20	
	38-54	Loam	CL, SC, SC- SM, CL-ML	A-2, A-4, A-6	0	0	85-100	85-100	60-100	30-80	20-40	5-20	
	54-80	Loam	CL, SC, SC- SM, CL-ML	A-6, A-2, A-4	0	0	85-100	85-100	60-100	30-80	20-40	5-20	



ENGINEERING INDEX PROPERTIES--Continued  
Reno County, Kansas

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Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index	
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200			
	In				Pct	Pct					Pct		
3052: Ost-----	0-8	Loam	CL, CL-ML	A-6, A-4	0	0	95-100	95-100	85-95	60-75	20-35	5-15	
	8-12	Loam	CL	A-6, A-7	0	0	95-100	90-100	85-100	60-80	30-45	10-20	
	12-18	Loam	CL	A-6, A-7	0	0	95-100	90-100	85-100	60-80	30-45	10-20	
	18-23	Clay loam	CL, SC	A-6, A-7	0	0	95-100	90-100	80-100	35-80	30-45	10-20	
	23-38	Clay loam	CL, SC, SC- SM, CL-ML	A-2, A-4, A-6	0	0	85-100	85-100	60-100	30-80	20-40	5-20	
	38-54	Loam	CL, SC, SC- SM, CL-ML	A-2, A-4, A-6	0	0	85-100	85-100	60-100	30-80	20-40	5-20	
	54-80	Loam	CL, SC, SC- SM, CL-ML	A-2, A-4, A-6	0	0	85-100	85-100	60-100	30-80	20-40	5-20	
Clark-----	0-11	Loam	CL, CL-ML	A-4, A-6	0	0	100	95-100	80-95	60-75	25-35	5-15	
	11-16	Loam	CL	A-6	0	0	100	95-100	80-100	50-80	30-40	10-20	
	16-28	Loam	CL	A-4	0	0	100	95-100	80-100	50-80	30-40	10-20	
	28-45	Fine sandy loam	CL	A-4	0	0	100	95-100	80-100	50-80	30-40	10-20	
	45-65	Fine sandy loam	CL	A-4	0	0	100	95-100	80-100	50-80	30-40	10-20	
	65-80	Very fine sandy loam	CL	A-4	0	0	100	95-100	80-100	50-80	30-40	10-20	
	3170: Penalosa-----	0-5	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	96-100	80-98	21-37	2-13
5-10		Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	96-100	80-98	21-37	2-13	
10-14		Silty clay loam	CL	A-6, A-7	0	0	100	100	96-100	80-98	33-43	12-26	
14-22		Silty clay loam	CL	A-6, A-7	0	0	100	100	96-100	80-98	33-43	12-26	
22-28		Silty clay loam	CH, CL	A-6, A-7	0	0	100	96-100	96-100	85-99	37-60	15-34	
28-34		Silty clay loam	CH, CL	A-6, A-7	0	0	100	96-100	96-100	85-99	37-60	15-34	
34-39		Silty clay loam	CH, CL	A-6, A-7	0	0	100	96-100	96-100	90-99	37-60	15-34	
39-48		Silt loam	ML, CL-ML, CL	A-6, A-4	0	0	100	100	96-100	80-98	21-37	2-13	
48-61		Silty clay loam	CH, CL	A-6, A-7	0	0	100	96-100	96-100	85-99	37-60	15-34	
61-71		Silty clay loam	CH, CL	A-6, A-7	0	0	100	96-100	96-100	85-99	37-60	15-34	
71-80		Clay loam	CH, CL	A-6, A-7	0	0	100	96-100	96-100	80-99	37-60	15-34	
3171: Penalosa-----		0-5	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	96-100	80-98	21-37	2-13
		5-10	Silty clay loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	96-100	80-98	21-37	2-13
	10-14	Silty clay loam	CL	A-6, A-7	0	0	100	100	96-100	80-98	33-43	12-26	
	14-22	Silty clay loam	CL	A-6, A-7	0	0	100	100	96-100	80-98	33-43	12-26	
	22-28	Silty clay loam	CH, CL	A-6, A-7	0	0	100	96-100	96-100	85-99	37-60	15-34	
	28-34	Silty clay loam	CH, CL	A-6, A-7	0	0	100	96-100	96-100	85-99	37-60	15-34	
	34-39	Silty clay loam	CH, CL	A-6, A-7	0	0	100	96-100	96-100	90-99	37-60	15-34	
	39-48	Silt loam	ML, CL-ML, CL	A-6, A-4	0	0	100	100	96-100	80-98	21-37	2-13	
	48-61	Silty clay loam	CH, CL	A-6, A-7	0	0	100	96-100	96-100	85-99	37-60	15-34	
	61-71	Silty clay loam	CH, CL	A-6, A-7	0	0	100	96-100	96-100	85-99	37-60	15-34	
	71-80	Clay loam	CH, CL	A-6, A-7	0	0	100	96-100	96-100	80-99	37-60	15-34	
	3180: Pratt-----	0-8	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	95-100	65-100	5-35	0-14	NP
		8-24	Loamy fine sand	SM, SC-SM	A-2, A-4	0	0	100	95-100	90-100	15-40	0-20	NP-6
24-64		Stratified fine sand to loamy fine sand	SM, SC-SM	A-2, A-4	0	0	100	95-100	90-100	15-40	0-20	NP-6	
3181: Pratt-----	64-80	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	95-100	80-100	5-35	0-14	NP	
	0-8	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	95-100	65-100	5-35	0-14	NP	
	8-24	Loamy fine sand	SM, SC-SM	A-2, A-4	0	0	100	95-100	90-100	15-40	0-20	NP-6	
Turon-----	24-64	Stratified fine sand to loamy fine sand	SM, SC-SM	A-2, A-4	0	0	100	95-100	90-100	15-40	0-20	NP-6	
	64-80	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	95-100	80-100	5-35	0-14	NP	
	0-8	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	80-100	5-25	0-0	NP	
	8-28	Loamy fine sand	SM, SP-SM	A-2-4	0	0	100	100	80-100	10-25	0-20	NP-3	
	28-40	Stratified loamy fine sand to fine sandy loam	SC-SM, SM, SP-SM	A-2-4	0	0	100	100	80-100	10-30	0-23	NP-6	
3190: Punkin-----	40-58	Silty clay	CH, CL	A-6, A-7-6	0	0	100	100	80-100	80-99	36-52	16-25	
	58-75	Silty clay	CH, CL	A-6, A-7-6	0	0	100	100	80-100	80-99	36-52	16-25	
	75-80	Silty clay	CH, CL	A-6, A-7-6	0	0	100	100	80-100	80-99	36-52	16-25	
	0-4	Silt loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	25-35	8-15	
	4-8	Silty clay	CL	A-4, A-6	0	0	100	100	85-95	60-75	25-35	8-15	
	8-15	Silty clay loam	CH, CL	A-7	0	0	100	100	90-100	75-95	45-65	20-40	
	15-21	Silty clay loam	CH, CL	A-7	0	0	100	100	90-100	75-95	45-65	20-40	
	21-39	Silty clay loam	CH, CL	A-7	0	0	100	100	90-100	75-95	45-65	20-40	
	39-47	Silty clay loam	CH, CL	A-7	0	0	100	100	90-100	75-95	45-65	20-40	
	47-64	Silty clay loam	CH, CL	A-7	0	0	100	100	90-100	75-95	45-65	20-40	
	64-78	Sandy clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-95	35-50	15-25	
	78-80	Sandy clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-95	35-50	15-25	



ENGINEERING INDEX PROPERTIES--Continued  
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Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
3191: Punkin-----	0-4	Silt loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	25-35	8-15
	4-8	Silty clay	CL	A-4, A-6	0	0	100	100	85-95	60-75	25-35	8-15
	8-15	Silty clay loam	CH, CL	A-7	0	0	100	100	90-100	75-95	45-65	20-40
	15-21	Silty clay loam	CH, CL	A-7	0	0	100	100	90-100	75-95	45-65	20-40
	21-39	Silty clay loam	CH, CL	A-7	0	0	100	100	90-100	75-95	45-65	20-40
	39-47	Silty clay loam	CH, CL	A-7	0	0	100	100	90-100	75-95	45-65	20-40
	47-64	Silty clay loam	CH, CL	A-7	0	0	100	100	90-100	75-95	45-65	20-40
	64-78	Sandy clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-95	35-50	15-25
Taver-----	78-80	Sandy clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-95	35-50	15-25
	0-7	Loam	CL	A-4, A-6	0	0	100	100	96-100	65-85	28-34	9-14
	7-17	Silty clay loam	CH, CL	A-7-6	0	0	100	100	96-100	90-99	48-60	30-40
	17-33	Silty clay	CH, CL	A-7-6	0	0	100	100	96-100	90-99	48-60	30-40
	33-53	Silty clay loam	CH, CL	A-7-6	0	0	100	100	96-100	90-99	48-60	30-40
	53-64	Clay loam	CL	A-4, A-6	0	0	100	100	90-100	60-80	30-40	15-20
	64-80	Sandy clay loam	CL	A-4, A-6	0	0	100	100	90-100	60-80	30-40	15-20
3403: Sand Pit-----	---	---	---	---	---	---	---	---	---	---	---	---
3469: Smolan-----	0-5	Silty clay loam	CL	A-7	0	0	100	100	95-100	85-100	42-50	22-28
	5-8	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	85-100	35-50	15-28
	8-15	Silt loam	CL	A-6, A-7	0	0	100	100	95-100	85-100	35-50	15-28
	15-29	Silty clay loam	CH	A-7	0	0	100	100	95-100	90-100	50-65	28-40
	29-38	Silty clay loam	CH	A-7	0	0	100	100	95-100	90-100	50-65	28-40
	38-49	Silty clay loam	CH	A-7	0	0	100	100	95-100	90-100	50-65	28-40
	49-80	Silty clay loam	CL	A-7	0	0	100	100	95-100	90-100	42-50	22-28
3510: Saltcreek-----	0-5	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2-4, A-4	0	0	100	100	80-95	30-55	20-30	1-7
	5-10	Sandy clay loam	CL-ML, ML, SC-SM, SM	A-2-4, A-4	0	0	100	100	80-95	30-55	20-30	1-7
	10-26	Sandy clay loam	CL, SC	A-6	0	0	100	100	85-100	45-60	25-35	10-20
	26-39	Fine sandy loam	CL, SC	A-6	0	0	100	100	85-100	45-60	25-35	10-20
	39-56	Silty clay	CH, CL	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
	56-66	Silty clay loam	CH, CL	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
	66-80	Silty clay loam	CH, CL	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
Funmar-----	0-6	Loam	CL-ML, CL	A-4, A-6	0	0	100	100	85-100	60-85	25-35	5-15
	6-12	Loam	CL-ML, CL	A-4, A-6	0	0	100	100	85-100	60-85	25-35	5-15
	12-17	Loam	CL	A-6, A-4, A-7-6	0	0	100	100	85-100	60-80	30-45	7-20
	17-26	Clay loam	CL	A-6, A-4, A-7-6	0	0	100	100	85-100	60-80	30-45	7-20
	26-32	Loam	CL	A-6, A-4, A-7-6	0	0	100	100	85-100	60-80	30-45	7-20
	32-38	Silty clay loam	CL	A-6, A-7-6	0	0	100	100	90-100	75-100	40-50	20-30
	38-54	Silty clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-100	45-60	25-35
	54-66	Silty clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-100	45-60	25-35
	66-80	Silty clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-100	45-60	25-35
Farnum-----	0-5	Loam	CL-ML, CL	A-4, A-6	0	0	100	100	90-100	60-85	20-35	5-15
	5-15	Loam	CL-ML, CL	A-4, A-6	0	0	100	100	90-100	60-85	20-35	5-15
	15-21	Loam	CL	A-6	0	0	100	100	85-100	60-80	30-40	10-15
	21-34	Sandy clay loam	SC, CL	A-6, A-7-6	0	0	100	100	70-100	45-80	35-50	15-30
	34-48	Loam	SC, CL	A-6, A-7-6	0	0	100	100	70-100	45-80	35-50	15-30
	48-61	Clay loam	SC, CL	A-6, A-7-6	0	0	100	100	70-100	45-80	35-50	15-30
	61-73	Clay loam	SC, CL	A-6, A-7-6	0	0	100	100	70-100	45-80	35-50	15-30
	73-80	Loam	SC, CL, SC-SM, CL-ML	A-2, A-4, A-6	0	0	100	95-100	65-100	30-80	20-35	5-15
3511: Saltcreek-----	0-5	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2-4, A-4	0	0	100	100	80-95	30-55	20-30	1-7
	5-10	Sandy clay loam	CL-ML, ML, SC-SM, SM	A-2-4, A-4	0	0	100	100	80-95	30-55	20-30	1-7
	10-26	Sandy clay loam	CL, SC	A-6	0	0	100	100	85-100	45-60	25-35	10-20
	26-39	Fine sandy loam	CL, SC	A-6	0	0	100	100	85-100	45-60	25-35	10-20
	39-56	Silty clay	CH, CL	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
	56-66	Silty clay loam	CH, CL	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
	66-80	Silty clay loam	CH, CL	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
Naron, sandy substratum----	0-7	Fine sandy loam	SC, SC-SM, CL-ML	A-4	0	0	100	100	70-85	35-55	10-20	5-10
	7-19	Fine sandy loam	SC, SC-SM, CL-ML	A-4	0	0	100	100	70-85	35-55	10-20	5-10
	19-34	Loam	CL	A-4, A-6	0	0	100	100	80-95	50-70	30-35	10-15
	34-41	Sandy clay loam	CL	A-6	0	0	100	100	80-90	50-70	30-35	10-15
	41-61	Stratified loam to loamy fine sand to fine sandy loam	SM, SC-SM, SC	A-2, A-4	0	0	100	95-100	60-90	20-50	0-25	NP-10
	61-80	Coarse sand	SM	A-2-4	0	0	100	85-95	45-65	15-35	0-0	NP



ENGINEERING INDEX PROPERTIES--Continued  
Reno County, Kansas

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
3512: Saltcreek-----	0-5	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2-4, A-4	0	0	100	100	80-95	30-55	20-30	1-7
	5-10	Sandy clay loam	ML, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	80-95	30-55	20-30	1-7
	10-26	Sandy clay loam	CL, SC	A-6	0	0	100	100	85-100	45-60	25-35	10-20
	26-39	Fine sandy loam	CL, SC	A-6	0	0	100	100	85-100	45-60	25-35	10-20
	39-56	Silty clay	CH, CL	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
	56-66	Silty clay loam	CH, CL	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
	66-80	Silty clay loam	CH, CL	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
	0-8	Fine sandy loam	SM, SC-SM, ML, CL-ML	A-2, A-4	0	0	100	100	60-85	30-55	0-25	NP-7
	8-14	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	100	100	60-85	30-55	0-25	NP-7
	14-28	Sandy clay loam	CL, SC	A-6	0	0	100	100	60-90	35-55	30-35	10-15
Naron-----	28-39	Sandy clay loam	CL, SC	A-6	0	0	100	100	60-90	35-55	30-35	10-15
	39-55	Sandy clay loam	CL, SC	A-6	0	0	100	100	60-90	35-55	30-35	10-15
	55-66	Fine sandy loam	SC, SC-SM, SM	A-2, A-4	0	0	100	100	60-90	20-50	0-25	NP-10
	66-80	Loamy fine sand	SC, SC-SM, SM	A-2, A-4	0	0	100	100	60-90	20-50	0-25	NP-10
	0-4	Loamy sand	SM	A-2-4	0	0	100	95-100	75-100	15-30	0-0	NP
	4-8	Loamy sand	SM	A-2-4	0	0	100	95-100	75-100	15-30	0-0	NP
	8-13	Loamy sand	SM	A-2-4	0	0	99-100	95-100	75-100	15-30	0-0	NP
	13-22	Loamy sand	SM, SP-SM	A-2-4, A-3	0	0	100	95-100	75-95	8-30	0-0	NP
	22-30	Sand	SM, SP-SM	A-2-4, A-3	0	0	99-100	95-100	75-95	8-30	0-0	NP
	30-37	Sand	SM, SP, SP-SM	A-2-4, A-3	0	0	85-100	80-95	65-85	1-15	0-0	NP
3520: Saxman-----	37-48	Sand	SM, SP, SP-SM	A-2-4, A-3	0	0	85-100	80-97	65-85	1-15	0-0	NP
	48-54	Fine sand	SP, SP-SM, SM	A-2-4, A-3	0	0	85-100	80-95	65-85	1-15	0-0	NP
	54-80	Stratified gravelly coarse sand	SP, SP-SM	A-1-b, A-2-4, A-3	0	0	85-100	75-95	35-55	1-10	0-0	NP
	0-5	Sandy loam	SM, ML	A-4, A-2	0	0	95-100	95-100	75-100	30-55	0-30	NP-5
	5-11	Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	11-19	Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	19-33	Sandy loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	33-47	Coarse sandy loam	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
	47-59	Loamy sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
	59-73	Sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
3530: Shellabarger, Eroded-----	73-80	Sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
	0-9	Sandy loam	SC, SC-SM, SM	A-2, A-4	0	0	100	75-100	60-90	25-45	0-25	NP-10
	9-16	Sandy loam	SC, SC-SM, SM	A-2, A-4	0	0	85-100	75-100	50-95	25-40	20-30	NP-10
	16-27	Sandy loam	SC, SC-SM, SM	A-2, A-4	0	0	85-100	75-100	50-95	25-40	20-30	NP-10
	27-48	Loamy coarse sand	SC, SC-SM, SM	A-1-b, A-2	0	0	85-100	75-90	40-70	15-30	0-25	NP-10
	48-80	Sand	GM, GP-GM, SM, SP-SM, GP-GC, SP- SC, SC-SM, GC-GM	A-3, A-1, A-2	0	0-5	40-100	35-85	30-70	5-30	0-20	NP-5



ENGINEERING INDEX PROPERTIES--Continued  
Reno County, Kansas

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index	
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200			
					Pct	Pct							
3531: Shellabarger, Moderately Eroded-----	In												
	0-6	Sandy loam	SM, ML	A-4, A-2	0	0	95-100	95-100	75-100	30-55	0-30	NP-5	
	6-11	Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20	
	11-19	Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20	
	19-33	Sandy loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20	
	33-47	Coarse sandy loam	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10	
	47-59	Loamy sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10	
	59-73	Sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10	
	73-80	Sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10	
	Nalim-----	0-6	Loam	CL-ML, CL	A-4, A-6	0	0	95-100	95-100	95-100	65-85	20-35	5-15
6-9		Loam	CL-ML, CL	A-4, A-6	0	0	95-100	95-100	95-100	65-85	20-35	5-15	
9-13		Clay loam	SC, CL, SM, ML	A-6, A-7-6	0	0	95-100	95-100	65-100	45-80	35-55	11-25	
13-21		Clay loam	SC, CL, SM, ML	A-7-6, A-6	0	0	95-100	95-100	65-100	45-80	35-55	11-25	
21-31		Clay loam	SC, CL, SM, ML	A-6, A-7-6	0	0	95-100	95-100	65-100	45-80	35-55	11-25	
31-39		Sandy clay loam	SC, CL	A-6, A-4, A- 2-6	0	0	95-100	95-100	65-100	30-80	25-40	10-20	
39-44		Gravelly sandy clay loam	SC, CL	A-6, A-4, A- 2-6	0	0	95-100	95-100	65-100	30-80	25-40	10-20	
44-52		Sandy clay loam	SC, CL	A-2, A-4, A-6	0	0	95-100	95-100	60-90	15-70	25-40	10-20	
52-62		Loamy coarse sand	SC, SC-SM, SM	A-1-b, A-2	0	0	85-100	75-90	40-70	15-30	0-25	NP-10	
62-72		Gravelly loamy coarse sand	GM, GP-GM, SM, SP-SM, SP-SC, GP- GC, SC-SM, GC-GM	A-3, A-1, A-2	0	0	40-100	35-85	30-70	5-30	0-20	NP-5	
72-80	Stratified sand to gravelly loamy coarse sand	GC-GM, SC-SM, GP-GC, SP- SC, GM, GP- GM, SM, SP- SM	A-3, A-1, A-2	0	0	40-100	35-85	30-70	5-30	0-20	NP-5		
3532: Shellabarger---	0-6	Loamy sand	SM	A-2	0	0	95-100	95-100	70-100	15-35	0-14	NP	
	6-11	Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20	
	11-19	Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20	
	19-33	Sandy loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20	
	33-47	Coarse sandy loam	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10	
	47-59	Loamy sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10	
	59-73	Sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10	
	73-80	Sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10	
	3533: Shellabarger---	0-7	Sandy loam	SM, ML	A-4, A-2	0	0	95-100	95-100	75-100	30-55	0-30	NP-5
		7-11	Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
11-19		Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20	
19-33		Sandy loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20	
33-47		Coarse sandy loam	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10	
47-59		Loamy sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10	
59-73		Sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10	
73-80		Sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10	
3534: Shellabarger---		0-7	Sandy loam	SM, ML	A-4, A-2	0	0	95-100	95-100	75-100	30-55	0-30	NP-5
		7-11	Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	11-19	Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20	
	19-33	Sandy loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20	
	33-47	Coarse sandy loam	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10	
	47-59	Loamy sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10	
	59-73	Sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10	
	73-80	Sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10	



ENGINEERING INDEX PROPERTIES--Continued  
Reno County, Kansas

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Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct					Pct	
3535: Shellabarger---	In											
	0-7	Sandy loam	SM, ML	A-4, A-2	0	0	95-100	95-100	75-100	30-55	0-30	NP-5
	7-11	Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	11-19	Sandy clay loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	19-33	Sandy loam	SC	A-4, A-6	0	0	95-100	85-100	70-90	35-50	25-40	8-20
	33-47	Coarse sandy loam	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
	47-59	Loamy sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
	59-73	Sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
	73-80	Sand	SC, SM, SP- SM, SC-SM	A-2, A-4	0	0	80-100	70-100	50-80	10-40	0-30	NP-10
Nalim-----	0-6	Loam	CL-ML, CL	A-4, A-6	0	0	95-100	95-100	95-100	65-85	20-35	5-15
	6-9	Loam	CL-ML, CL	A-4, A-6	0	0	95-100	95-100	95-100	65-85	20-35	5-15
	9-13	Clay loam	SC, CL, SM, ML	A-6, A-7-6	0	0	95-100	95-100	65-100	45-80	35-55	11-25
	13-21	Clay loam	SC, CL, SM, ML	A-7-6, A-6	0	0	95-100	95-100	65-100	45-80	35-55	11-25
	21-31	Clay loam	SC, CL, SM, ML	A-6, A-7-6	0	0	95-100	95-100	65-100	45-80	35-55	11-25
	31-39	Sandy clay loam	SC, CL	A-6, A-4, A- 2-6	0	0	95-100	95-100	65-100	30-80	25-40	10-20
	39-44	Gravelly sandy clay loam	SC, CL	A-6, A-4, A- 2-6	0	0	95-100	95-100	65-100	30-80	25-40	10-20
	44-52	Sandy clay loam	SC, CL	A-2, A-4, A-6	0	0	95-100	95-100	60-90	15-70	25-40	10-20
	52-62	Loamy coarse sand	SC, SC-SM, SM	A-1-b, A-2	0	0	85-100	75-90	40-70	15-30	0-25	NP-10
	62-72	Gravelly loamy coarse sand	GM, GP-GM, SM, SP-SM, GC-GM, SC- SM, GP-GC, SP-SC	A-3, A-1, A-2	0	0	40-100	35-85	30-70	5-30	0-20	NP-5
	72-80	Stratified sand to gravelly loamy coarse sand	GM, GP-GM, SM, SP-SM, GC-GM, SC- SM, GP-GC, SP-SC	A-3, A-1, A-2	0	0	40-100	35-85	30-70	5-30	0-20	NP-5
3540: Solvay-----	0-5	Loamy fine sand	SC-SM, SM	A-2-4	0	0	100	100	85-100	15-30	10-20	NP-5
	5-14	Fine sandy loam	CL, SC	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	14-23	Fine sandy loam	CL, SC	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	23-37	Fine sandy loam	CL, SC	A-6	0	0	100	100	85-100	45-60	25-35	10-15
	37-58	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-4	0	0	100	100	55-100	20-52	20-30	5-10
	58-76	Loamy fine sand	CL, CL-ML, SC, SC-SM	A-4	0	0	100	100	55-100	20-52	20-30	5-10
	76-80	Loamy fine sand	CL, CL-ML, SC, SC-SM	A-4	0	0	100	100	55-100	20-52	20-30	5-10
3550: Spelvin-----	0-5	Loamy sand	SM	A-2-4	0	0	100	99-100	75-100	15-30	0-0	NP
	5-23	Sandy clay loam	CL, SC	A-6	0	0	100	85-100	75-95	40-55	30-40	10-20
	23-34	Sandy clay loam	CL, SC	A-6	0	0	100	85-100	75-95	40-55	30-40	10-20
	34-50	Sandy loam	SC, SC-SM	A-2-4, A-4	0	0	100	85-100	65-85	30-45	25-30	5-10
	50-58	Loamy sand	SM, SP-SC, SP-SM, SC-SM	A-2-4, A-4	0	0	95-100	85-100	55-75	10-40	10-20	NP-5
	58-80	Sand	SP-SM, SM	A-2-4, A-3	0	0	95-100	80-100	50-75	5-25	0-0	NP
3639: Taver-----	0-7	Loam	CL	A-4, A-6	0	0	100	100	96-100	65-85	28-34	9-14
	7-17	Silty clay loam	CH, CL	A-7-6	0	0	100	100	96-100	90-99	48-60	30-40
	17-33	Silty clay	CH, CL	A-7-6	0	0	100	100	96-100	90-99	48-60	30-40
	33-53	Silty clay loam	CH, CL	A-7-6	0	0	100	100	96-100	90-99	48-60	30-40
	53-64	Clay loam	CL	A-4, A-6	0	0	100	100	90-100	60-80	30-40	15-20
	64-80	Sandy clay loam	CL	A-4, A-6	0	0	100	100	90-100	60-80	30-40	15-20
3640: Tivin-----	0-7	Fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	90-100	5-25	0-0	NP
	7-18	Fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	80-100	5-25	0-0	NP
	18-80	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	80-100	5-25	0-0	NP
3641: Tivin-----	0-7	Fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	90-100	5-25	0-0	NP
	7-18	Fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	80-100	5-25	0-0	NP
	18-80	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	80-100	5-25	0-0	NP
Dillhut-----	0-4	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	80-100	5-15	0-0	NP
	4-9	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	80-100	5-15	0-0	NP
	9-18	Fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	80-100	5-15	0-0	NP
	18-26	Fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	80-100	5-15	0-0	NP
	26-41	Fine sandy loam	CL, SC	A-6	0	0	100	100	80-100	36-55	30-40	10-20
	41-55	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0	0	100	100	80-95	30-55	26-32	7-11
	55-65	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0	0	100	100	80-95	30-55	26-32	7-11
	65-70	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0	0	100	100	80-95	30-55	26-32	7-11
	70-80	Fine sandy loam	SC, SC-SM, SM, SP-SC, SP-SM	A-2-4	0	0	100	100	50-70	5-25	22-30	NP-10



ENGINEERING INDEX PROPERTIES--Continued  
Reno County, Kansas

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index	
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200			
	In				Pct	Pct					Pct		
3642: Tivin-----	0-11	Fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	90-100	5-25	0-0	NP	
	11-53	Fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	80-100	5-25	0-0	NP	
	53-63	Silt loam	CL, CL-ML, SC, SC-SM	A-4	0	0	100	100	80-95	45-55	20-30	5-10	
Willowbrook, occasionally flooded-----	63-80	Sand	SM, SP-SM	A-2, A-3	0	0	100	80-100	50-65	5-15	0-0	NP	
	0-4	Fine sandy loam	SC, SC-SM	A-4	0	0	100	99-100	90-100	36-45	20-30	5-10	
	4-9	Fine sandy loam	SC, SC-SM	A-4	0	0	100	99-100	90-100	36-45	20-30	5-10	
	9-13	Fine sandy loam	SC-SM, SC	A-4	0	0	100	99-100	92-100	34-42	20-30	5-10	
	13-17	Fine sandy loam	SC-SM, SC	A-2-4, A-4	0	0	100	99-100	90-100	34-42	20-30	5-10	
	17-19	Loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	90-100	70-95	25-58	15-25	NP-10	
	19-26	Fine sandy loam	SC, SC-SM, SM	A-2-4, A-4	0	0	98-100	90-100	70-95	25-45	15-25	NP-10	
	26-45	Coarse sand	SP-SM, SP	A-1-b, A-3	0	0	90-100	80-100	35-75	1-10	0-0	NP	
	45-51	Coarse sand	SP-SM, SP	A-1-b, A-3	0	0	85-100	75-95	35-55	1-10	0-0	NP	
	51-80	Stratified gravelly coarse sand to sand	SP, SP-SM	A-1-b, A-3	0	0	85-100	75-95	35-55	1-10	0-0	NP	
	3643: Tobin-----	0-6	Silt loam	CL	A-6	0	0	100	100	90-100	70-90	30-35	10-15
		6-15	Silty clay loam	CL	A-6	0	0	100	100	90-100	70-90	30-35	10-15
15-34		Silt loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	30-45	10-20	
34-47		Silt loam	CL	A-6, A-7	0	0	100	100	85-100	70-95	30-45	10-20	
47-80		Silty clay loam	CL	A-6, A-7	0	0	100	100	85-100	70-95	30-45	10-20	
3644: Turon-----	0-8	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	80-100	5-25	0-0	NP	
	8-28	Loamy fine sand	SM, SP-SM	A-2-4	0	0	100	100	80-100	10-25	0-20	NP-3	
	28-40	Stratified loamy fine sand to fine sandy loam	SC-SM, SM, SP-SM, SP-SC	A-2-4	0	0	100	100	80-100	10-30	0-23	NP-6	
Carway-----	40-58	Silty clay	CH, CL	A-6, A-7-6	0	0	100	100	80-100	80-99	36-52	16-25	
	58-75	Silty clay	CH, CL	A-6, A-7-6	0	0	100	100	80-100	80-99	36-52	16-25	
	75-80	Silty clay	CH, CL	A-6, A-7-6	0	0	100	100	80-100	80-99	36-52	16-25	
	0-7	Loamy fine sand	SM, SC-SM	A-2-4	0	0	100	100	85-100	15-30	10-20	NP-5	
	7-10	Sandy clay loam	SC, CL	A-6	0	0	100	100	85-100	45-60	25-35	10-15	
	10-15	Sandy clay loam	SC, CL	A-6	0	0	100	100	85-100	45-60	25-35	10-15	
	15-22	Fine sandy loam	SC, CL	A-6	0	0	100	100	85-100	45-60	25-35	10-15	
	22-35	Fine sandy loam	SC, CL	A-6	0	0	100	100	85-100	45-60	25-35	10-15	
	35-40	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-60	25-40	
	40-54	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-60	25-40	
	54-63	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-60	25-40	
	63-72	Clay loam	CL, CH	A-7-6	0	0	100	100	90-100	85-99	45-60	25-40	
72-80	Clay loam	SC, CL	A-6	0	0	100	100	75-90	45-60	25-35	10-15		
3760: Urban Land, Protected-----	---	---	---	---	---	---	---	---	---	---	---		
Blazefork, Protected-----	0-3	Silty clay loam	CL, CH	A-7-6	0	0	100	100	95-100	85-95	45-55	25-35	
Kaskan, Protected-----	3-7	Silty clay	CH, CL	A-7-6	0	0	100	100	95-100	85-95	45-55	25-35	
	7-14	Silty clay loam	CH	A-7-6	0	0	100	100	95-100	90-95	50-65	30-40	
	14-22	Silty clay	CH	A-7-6	0	0	100	100	95-100	90-95	50-65	30-40	
	22-29	Silty clay	CH	A-7-6	0	0	100	100	95-100	90-95	50-65	30-40	
	29-34	Silty clay	CH	A-7-6	0	0	100	100	95-100	90-95	50-65	30-40	
	34-40	Silty clay	CL	A-7-6	0	0	100	100	85-100	75-85	40-50	20-30	
	40-48	Silty clay loam	CL	A-7-6	0	0	100	100	85-100	75-85	40-50	20-30	
	48-61	Clay loam	CL	A-7-6	0	0	100	100	85-100	75-85	40-50	20-30	
	61-80	Loam	CL	A-7-6	0	0	100	100	85-100	75-85	40-50	20-30	
	0-7	Loam	CL	A-6	0	0	100	100	95-100	85-100	30-35	10-15	
	7-17	Clay loam	CL	A-6, A-7	0	0	100	100	100	85-100	35-45	15-20	
	17-24	Loam	CL	A-6	0	0	100	100	80-95	60-80	30-35	10-15	
24-35	Fine sandy loam	SC, SC-SM	A-2-4, A-4	0	0	100	100	70-85	30-45	20-30	5-10		
35-41	Loamy fine sand	SM	A-2-4	0	0	100	95-100	65-85	15-30	0-0	NP		
41-47	Fine sand	SM	A-2-4	0	0	100	95-100	65-85	15-30	0-0	NP		
47-66	Sand	SM	A-2-4	0	0	100	95-100	65-85	15-30	0-0	NP		
66-80	Stratified gravelly coarse sand to sand	SP, SP-SM	A-1-b, A-2-4, A-3	0	0	95-100	75-95	35-55	1-10	0-0	NP		
3762: Urban Land-----	---	---	---	---	---	---	---	---	---	---	---		



ENGINEERING INDEX PROPERTIES--Continued  
Reno County, Kansas

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Darlow-----	0-5	Loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-95	53-75	21-30	4-11
	5-8	Loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-95	53-75	21-30	4-11
	8-14	Loam	CL	A-6	0	0	100	100	90-100	60-80	30-39	11-18
	14-20	Clay loam	CL	A-6	0	0	100	100	90-100	60-80	30-39	11-18
	20-26	Loam	CL	A-6	0	0	100	100	90-100	60-80	30-39	11-18
	26-33	Loam	CL	A-6, A-7-6	0	0	100	100	90-100	55-80	30-44	11-22
	33-44	Loam	CL	A-6, A-7-6	0	0	100	100	90-100	55-80	30-44	11-22
	44-53	Loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0	100	100	90-100	40-52	23-37	6-16
	53-68	Loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0	100	100	90-100	40-52	23-37	6-16
	68-80	Sandy loam	SC-SM, SM	A-2	0	0	100	99-100	80-90	16-32	10-18	NP-5
Elmer-----	0-6	Fine sandy loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	50-60	20-30	3-10
	6-9	Fine sandy loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	50-60	20-30	3-10
	9-19	Fine sandy loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	50-60	20-30	3-10
	19-26	Fine sandy loam	CL, SC	A-6	0	0	100	98-100	90-100	45-60	25-35	10-20
	26-37	Fine sandy loam	CL, SC	A-6	0	0	100	98-100	90-100	45-60	25-35	10-20
	37-41	Loam	CL	A-6, A-7-6	0	0	99-100	98-100	90-100	65-85	30-45	15-25
	41-51	Clay loam	CL	A-6, A-7-6	0	0	99-100	98-100	90-100	65-85	30-45	15-25
	51-61	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-2-4, A-2-6, A-4, A-6	0	0	98-100	97-100	85-95	34-55	20-30	6-16
	61-72	Fine sandy loam	SC, SC-SM, CL, CL-ML	A-2-4, A-2-6, A-4, A-6	0	0	98-100	97-100	85-95	34-55	20-30	6-16
	72-80	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-2-4, A-2-6, A-4, A-6	0	0	98-100	97-100	85-95	34-55	20-30	6-16
3763: Urban Land, Protected----- Imano, Protecte	---	---	---	---	---	---	---	---	---	---	---	
	0-10	Clay loam	CL	A-7-6, A-6	0	0	100	100	90-100	70-80	35-45	15-22
	10-25	Loam	CL	A-4, A-6, A- 7-6	0	0	100	100	85-100	60-80	25-45	7-22
	25-55	Stratified fine sand to sand	SP, SP-SM	A-1, A-2, A- 3, A-4	0	0	100	95-100	30-55	0-10	0-10	NP
	55-80	Coarse sand	SP	A-1, A-2, A- 3, A-4	0	0	100	95-100	30-55	0-5	0-10	NP
3764: Urban Land, Protected----- Mahone, Protected-----	---	---	---	---	---	---	---	---	---	---	---	
	0-8	Loamy fine sand	SC-SM, SM	A-2-4, A-4	0	0	100	100	75-95	25-45	0-20	NP-5
	8-14	Fine sandy loam	SC-SM, SM	A-2-4, A-4	0	0	100	100	75-95	25-45	0-20	NP-5
	14-20	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-4	0	0	100	90-100	75-95	45-65	20-30	5-10
	20-25	Very fine sandy loam	CL, CL-ML, SC, SC-SM	A-4	0	0	100	90-100	75-95	45-65	20-30	5-10
	25-33	Silt loam	CL, CL-ML, SC, SC-SM	A-4	0	0	100	90-100	75-95	45-65	20-30	5-10
	33-39	Stratified silt loam to fine sandy loam	CL, CL-ML, SC, SC-SM	A-4	0	0	100	90-100	75-95	45-65	20-30	5-10
	39-42	Clay loam	CL	A-6, A-7-6	0	0	100	100	98-100	85-95	30-45	10-25
	42-48	Fine sandy loam	CL	A-7-6, A-6, A-4	0	0	100	100	98-100	85-95	30-45	10-25
	48-54	Very fine sandy loam	CL-ML, SC, SC-SM	A-4, A-6	0	0	100	95-100	65-100	40-90	20-35	5-20
	54-61	Fine sandy loam	CL-ML, SC, SC-SM	A-4, A-6	0	0	100	95-100	65-100	40-90	20-35	5-20
	61-66	Fine sandy loam	CL-ML, SC, SC-SM	A-4, A-6	0	0	100	95-100	65-100	40-90	20-35	5-20
	66-71	Fine sandy loam	CL-ML, SC, SC-SM	A-4, A-6	0	0	100	95-100	65-100	40-90	20-35	5-20
	71-78	Loamy fine sand	SP-SM, SW, SW-SM	A-1-b, A-3, A-2-4	0	0	99-100	85-100	35-75	1-10	0-0	NP
	78-80	Coarse sand	SP-SM, SW, SW-SM	A-1-b, A-3	0	0	99-100	85-100	35-75	1-10	0-0	NP
3765: Urban Land----- Saltcreek-----	---	---	---	---	---	---	---	---	---	---	---	
	0-5	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2-4, A-4	0	0	100	100	80-95	30-55	20-30	1-7
	5-10	Sandy clay loam	CL-ML, ML, SC-SM, SM	A-2-4, A-4	0	0	100	100	80-95	30-55	20-30	1-7
	10-26	Sandy clay loam	CL, SC	A-6	0	0	100	100	85-100	45-60	25-35	10-20
	26-39	Fine sandy loam	CL, SC	A-6	0	0	100	100	85-100	45-60	25-35	10-20
	39-56	Silty clay	CH, CL	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
	56-66	Silty clay loam	CH, CL	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
	66-80	Silty clay loam	CH, CL	A-7-6	0	0	100	100	90-100	85-99	45-55	25-35
Naron-----	0-7	Fine sandy loam	SC, SC-SM, CL-ML	A-4	0	0	100	100	70-85	35-55	10-20	5-10
	7-19	Fine sandy loam	SC, SC-SM, CL-ML	A-4	0	0	100	100	70-85	35-55	10-20	5-10
	19-34	Loam	CL	A-4, A-6	0	0	100	100	80-95	50-70	30-35	10-15
	34-41	Sandy clay loam	CL	A-6	0	0	100	100	80-90	50-70	30-35	10-15
	41-61	Stratified loam to loamy fine sand to fine sandy loam	SM, SC-SM, SC	A-2, A-4	0	0	100	95-100	60-90	20-50	0-25	NP-10
	61-80	Coarse sand	SM	A-2-4	0	0	100	85-95	45-65	15-35	0-0	NP



ENGINEERING INDEX PROPERTIES--Continued  
Reno County, Kansas

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct					Pct	
3766: Urban Land, Protected----- Saxman, Protected-----	In											
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	0-4	Loamy sand	SM	A-2-4	0	0	100	95-100	75-100	15-30	0-0	NP
	4-8	Loamy sand	SM	A-2-4	0	0	100	95-100	75-100	15-30	0-0	NP
	8-13	Loamy sand	SM	A-2-4	0	0	99-100	95-100	75-100	15-30	0-0	NP
	13-22	Loamy sand	SM, SP-SM	A-2-4, A-3	0	0	100	95-100	75-95	8-30	0-0	NP
	22-30	Sand	SM, SP-SM	A-2-4, A-3	0	0	99-100	95-100	75-95	8-30	0-0	NP
	30-37	Sand	SM, SP, SP-SM	A-2-4, A-3	0	0	85-100	80-95	65-85	1-15	0-0	NP
	37-48	Sand	SM, SP, SP-SM	A-2-4, A-3	0	0	85-100	80-97	65-85	1-15	0-0	NP
	48-54	Fine sand	SM, SP, SP-SM	A-2-4, A-3	0	0	85-100	80-95	65-85	1-15	0-0	NP
	54-80	Stratified gravelly coarse sand	SP, SP-SM	A-1-b, A-2-4, A-3	0	0	85-100	75-95	35-55	1-10	0-0	NP
3767: Urban Land, Protected----- Willowbrook, Protected-----	---	---	---	---	---	---	---	---	---	---	---	---
	0-4	Fine sandy loam	SC, SC-SM	A-4	0	0	100	99-100	90-100	36-45	20-30	5-10
	4-9	Fine sandy loam	SC, SC-SM	A-4	0	0	100	99-100	90-100	36-45	20-30	5-10
	9-13	Fine sandy loam	SC-SM, SC	A-4	0	0	100	99-100	92-100	34-42	20-30	5-10
	13-17	Fine sandy loam	SM, SC-SM, SC	A-2-4, A-4	0	0	100	99-100	90-100	34-42	20-30	5-10
	17-19	Loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	90-100	70-95	25-58	15-25	NP-10
	19-26	Fine sandy loam	SC, SC-SM, SM	A-2-4, A-4	0	0	98-100	90-100	70-95	25-45	15-25	NP-10
	26-45	Coarse sand	SP-SM, SP	A-1-b, A-3	0	0	90-100	80-100	35-75	1-10	0-0	NP
	45-51	Coarse sand	SP-SM, SP	A-1-b, A-3	0	0	85-100	75-95	35-55	1-10	0-0	NP
	51-80	Stratified gravelly coarse sand to sand	SP, SP-SM	A-1-b, A-3	0	0	85-100	75-95	35-55	1-10	0-0	NP
3768: Urban Land, Protected----- Yaggy, Protecte	---	---	---	---	---	---	---	---	---	---	---	---
	0-5	Fine sandy loam	CL-ML, SC-SM, SC, CL	A-4	0	0	100	99-100	85-100	40-65	10-25	5-10
	5-11	Fine sandy loam	CL-ML, SC-SM, SC, CL	A-4	0	0	100	99-100	85-100	40-60	10-25	5-10
	11-14	Stratified very fine sandy loam to silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	95-100	75-95	60-80	10-35	5-15
	14-24	Fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	80-100	70-95	1-12	0-0	NP
	24-31	Fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	80-100	70-98	1-12	0-0	NP
	31-42	Fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	80-100	70-97	1-12	0-0	NP
	42-53	Stratified gravelly coarse sand	SP, SP-SM	A-1-b, A-3	0	0	85-100	75-95	35-55	1-10	0-0	NP
	53-69	Stratified gravelly coarse sand to sand	SP, SP-SM	A-1-b, A-3	0	0	85-100	75-95	35-55	1-10	0-0	NP
	69-80	Stratified gravelly coarse sand to sand	SP, SP-SM	A-1-b, A-3	0	0	85-100	75-95	35-55	1-10	0-0	NP
3900: Warnut-----	0-2	Fine sandy loam	SC, SC-SM	A-2-4, A-4	0	0	100	100	85-100	25-40	20-25	5-10
	2-5	Loam	CL, SC	A-4, A-6	0	0	100	100	80-95	45-60	30-35	10-15
	5-11	Sandy clay loam	CL, SC	A-4, A-6	0	0	100	100	80-95	45-60	30-35	10-15
	11-15	Fine sandy loam	CL, SC	A-2-6, A-4, A-6	0	0	100	100	80-95	30-52	25-30	10-15
	15-22	Fine sandy loam	CL, SC	A-2-6, A-4, A-6	0	0	100	100	80-95	30-52	25-30	10-15
	22-37	Sandy loam	CL, SC	A-2-6, A-4, A-6	0	0	100	100	80-95	30-52	25-30	10-15
	37-60	Loamy sand	SC, SC-SM, SM	A-2-4	0	0	100	100	70-90	15-30	0-25	NP-10
	60-80	Sand	SC, SC-SM, SM	A-2-4	0	0	100	100	70-90	15-30	0-25	NP-10
3926: Water-----	---	---	---	---	---	---	---	---	---	---	---	---
3966: Willowbrook----	0-4	Fine sandy loam	SC, SC-SM	A-4	0	0	100	99-100	90-100	36-45	20-30	5-10
	4-9	Fine sandy loam	SC, SC-SM	A-4	0	0	100	99-100	90-100	36-45	20-30	5-10
	9-13	Fine sandy loam	SC-SM, SC	A-4	0	0	100	99-100	92-100	34-42	20-30	5-10
	13-17	Fine sandy loam	SM, SC-SM, SC	A-2-4, A-4	0	0	100	99-100	90-100	34-42	20-30	5-10
	17-19	Loam	SC, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	90-100	70-95	25-58	15-25	NP-10
	19-26	Fine sandy loam	SC, SC-SM, SM	A-2-4, A-4	0	0	98-100	90-100	70-95	25-45	15-25	NP-10
	26-45	Coarse sand	SP-SM, SP	A-3, A-1-b	0	0	90-100	80-100	35-75	1-10	0-0	NP
	45-51	Coarse sand	SP-SM, SP	A-1-b, A-3	0	0	85-100	75-95	35-55	1-10	0-0	NP
	51-80	Stratified gravelly coarse sand to sand	SP-SM, SP	A-1-b, A-3	0	0	85-100	75-95	35-55	1-10	0-0	NP



ENGINEERING INDEX PROPERTIES--Continued  
Reno County, Kansas

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct					Pct	
4004: Yaggy-----	In											
	0-5	Fine sandy loam	CL-ML, SC-SM, SM	A-4	0	0	100	99-100	85-100	40-65	10-25	5-10
	5-11	Fine sandy loam	CL-ML, SC-SM, SM	A-4	0	0	100	99-100	85-100	40-60	10-25	5-10
	11-14	Stratified very fine sandy loam to silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	95-100	75-95	60-80	10-35	5-15
	14-24	Fine sand	SP, SP-SM	A-2-4, A-3	0	0	100	80-100	70-95	1-10	0-0	NP
	24-31	Fine sand	SP, SP-SM	A-2-4, A-3	0	0	100	80-100	70-98	1-12	0-0	NP
	31-42	Fine sand	SP, SP-SM	A-2-4, A-3	0	0	100	80-100	70-97	1-12	0-0	NP
	42-53	Stratified gravelly coarse sand	SP, SP-SM	A-1-b, A-3	0	0	85-100	75-98	35-55	1-10	0-0	NP
	53-69	Stratified gravelly coarse sand to sand	SP, SP-SM	A-1-b, A-3	0	0	85-100	65-95	35-55	0-5	0-0	NP
	69-80	Stratified gravelly coarse sand to sand	SP, SP-SM	A-1-b, A-3	0	0	85-100	75-95	35-55	0-5	0-0	NP
4005: Yaggy-----	0-5	Fine sandy loam	CL-ML, SC-SM, SC	A-4	0	0	100	99-100	85-100	40-65	10-25	5-10
	5-11	Fine sandy loam	CL-ML, SC-SM, CL	A-4	0	0	100	99-100	85-100	40-60	10-25	5-10
	11-14	Stratified very fine sandy loam to silt loam	CL, CL-ML	A-4, A-6	0	0	100	95-100	75-95	60-80	10-35	5-15
	14-24	Fine sand	SP, SP-SM	A-2-4, A-3	0	0	100	80-100	70-95	1-12	0-0	NP
	24-31	Fine sand	SP, SP-SM	A-2-4, A-3	0	0	100	80-100	70-98	1-12	0-0	NP
	31-42	Fine sand	SP, SP-SM	A-2-4, A-3	0	0	100	80-100	70-97	1-12	0-0	NP
	42-53	Stratified gravelly coarse sand	SP, SP-SM	A-1-b, A-3	0	0	85-100	75-95	35-55	1-10	0-0	NP
	53-69	Stratified gravelly coarse sand to sand	SP, SP-SM	A-1-b, A-3	0	0	85-100	75-95	35-55	1-10	0-0	NP
	69-80	Stratified gravelly coarse sand to sand	SP, SP-SM	A-1-b, A-3	0	0	85-100	75-95	35-55	1-10	0-0	NP
Saxman-----	0-4	Loamy sand	SM	A-2-4	0	0	100	95-100	75-100	15-30	0-0	NP
	4-8	Loamy sand	SM	A-2-4	0	0	100	95-100	75-100	15-30	0-0	NP
	8-13	Loamy sand	SM	A-2-4	0	0	99-100	95-100	75-100	15-30	0-0	NP
	13-22	Loamy sand	SM, SP-SM	A-2-4, A-3	0	0	100	95-100	75-95	8-30	0-0	NP
	22-30	Sand	SM, SP-SM	A-2-4, A-3	0	0	99-100	95-100	75-95	8-30	0-0	NP
	30-37	Sand	SM, SP, SP-SM	A-2-4, A-3	0	0	85-100	80-95	65-85	1-15	0-0	NP
	37-48	Sand	SM, SP, SP-SM	A-2-4, A-3	0	0	85-100	80-97	65-85	1-15	0-0	NP
	48-54	Fine sand	SM, SP, SP-SM	A-2-4, A-3	0	0	85-100	80-95	65-85	1-15	0-0	NP
	54-80	Stratified gravelly coarse sand	SP, SP-SM	A-1-b, A-2-4, A-3	0	0	85-100	75-95	35-55	1-10	0-0	NP
4110: Zellmont-----	0-8	Sandy loam	CL, SC	A-4, A-6, A-2-4, A-2-6	0	0	95-100	95-100	75-100	30-55	25-35	10-15
	8-18	Sandy clay loam	CL, SC	A-4, A-6, A-2-4, A-2-6	0	0	95-100	95-100	65-100	45-80	30-40	10-20
	18-26	Sandy clay loam	SC, SC-SM, SP-SC	A-2-4	0	0	80-100	70-100	50-80	10-40	20-30	5-10
	26-32	Loam	CL, SC	A-2-4, A-2-6	0	0	85-100	70-100	65-100	45-80	30-40	10-20
	32-80	Weathered bedrock			---	---	---	---	---	---	---	---
Poxmash-----	0-5	Sandy loam	SC, SC-SM, SM	A-2, A-4	0	0	100	75-100	60-90	25-45	0-25	NP-10
	5-9	Sandy loam	SC, SC-SM, SM	A-2, A-4	0	0	100	75-100	60-90	25-45	0-25	NP-10
	9-15	Sandy loam	SC, SC-SM, SM	A-2, A-4	0	0	85-100	75-100	50-95	25-40	20-30	NP-10
	15-20	Loamy sand	SC, SC-SM, SM	A-1-b, A-2	0	0	85-100	75-90	40-70	15-30	0-25	NP-10
	20-33	Sand	GM, GP-GM, SM, SP-SM, GC-GM, SP-SC	A-1, A-2, A-3	0	0-5	40-100	35-85	30-70	5-30	0-20	NP-5
	33-48	Sand	GM, GP-GM, SM, SP-SM, SP-SC, GC-GM	A-1, A-2, A-3	0	0-5	40-100	35-85	30-70	5-30	0-20	NP-5
	48-80	Weathered bedrock			---	---	---	---	---	---	---	---



Physical Properties table shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In this table, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In this table, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In this table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earth moving operations.

Moist bulk density is the weight of soil (oven-dry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at 1/3- or 1/10-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Permeability ( $K \rightarrow \text{sat}$ ) refers to the ability of a soil to transmit water or air. The term "permeability," as used in soil surveys, indicates saturated hydraulic conductivity ( $K \rightarrow \text{sat}$ ). The estimates in the table indicate the rate of water movement, in inches per hour, when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In Physical Properties table, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter. The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion factors are shown in the Physical Properties table as the K factor ( $K_w$  and  $K_f$ ) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor  $K_w$  indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor  $K_f$  indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to



wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are as follows:

1. Coarse sands, sands, fine sands, and very fine sands.
2. Loamy coarse sands, loamy sands, loamy fine sands, loamy very fine sands, ash material, and sapric soil material.
3. Coarse sandy loams, sandy loams, fine sandy loams, and very fine sandy loams.
- 4L. Calcareous loams, silt loams, clay loams, and silty clay loams.
4. Clays, silty clays, noncalcareous clay loams, and silty clay loams that are more than 35 percent clay.
5. Noncalcareous loams and silt loams that are less than 20 percent clay and sandy clay loams, sandy clays, and hemic soil material.
6. Noncalcareous loams and silt loams that are more than 20 percent clay and noncalcareous clay loams that are less than 35 percent clay.
7. Silts, noncalcareous silty clay loams that are less than 35 percent clay, and fibric soil material.
8. Soils that are not subject to wind erosion because of coarse fragments on the surface or because of surface wetness.

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

#### Explanation of Wind Erodibility Groups

Soil erodibility by wind is directly related to the percentage of dry non-erodible surface soil aggregates larger than 0.84 mm in diameter. From this percentage, the wind erodibility index (I-factor) is determined. The I-factor is an expression of the stability of these soil aggregates against breakdown by tillage and abrasion from wind erosion. Soils are placed in Wind Erodibility Groups (WEG) having similar percentages of dry soil aggregates larger than 0.84 mm as shown in the following table.

WEG	Properties of Soil Surface Layer	Dry Soil Aggregates >0.84mm Percent	Wind Erodibility Index T/Ac/Yr (I)
1	Very fine sand, fine sand, sand, or coarse sand	1 2 3 5 7	310 1/ 250 220 180 160
2	Loamy very fine sand, loamy fine sand, loamy sand, loamy coarse sand, organic soil materials.	10	134
3	Very fine sandy loam, fine sandy loam, sandy loam, or coarse sandy loam.	25	86
4	Clay, silty clay, non-calcareous clay loam, or silty clay loam with >35 percent clay content.	25	86
4L	Calcareous 2/ loam, silt loam, clay loam, or silty clay loam.	25	86
5	Non-calcareous loam and silt loam with <20 percent clay content, or sandy clay loam, sandy clay, and hemic 3/ organic soil materials.	40	56
6	Non-calcareous loam and silt loam with >20 percent clay content, or non-calcareous clay loam with <35 percent clay content.	45	48
7	Silt, non-calcareous silty clay loam with >35 percent clay content and fibric 3/ organic soil material.	50	38
8	Soils not suitable for cultivation due to coarse fragments or wetness; wind erosion is not a problem.	--	0

1/ The "I" values for WEG 1 vary from 160 for coarse sands to 310 for very fine sands. Use an "I" of 220 as an average figure. For coarser sand that has gravel, use a lower figure. For a soil that has no gravel and very fine sand, use a higher figure. (Modification for coarse fragments is preparation.)

2/ Calcareous is a strongly or violently effervescent reaction to cold dilute (1N) HCL.

3/ See Soil Taxonomy for definition.



PHYSICAL PROPERTIES OF THE SOILS--Continued  
Reno County, Kansas: Published

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
990: Abbyville----	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
	0-8	41	39	15-25	1.30-1.55	0.60-2.00	0.17-0.19	0.0-2.9	1.0-3.0	.43	.43	2	6	48
	8-15	55	21	20-28	1.50-1.65	0.06-0.20	0.09-0.13	3.0-5.9	0.0-0.5	.43	.43			
	15-24	47	19	25-34	1.50-1.65	0.06-0.20	0.09-0.13	3.0-5.9	0.0-0.0	.32	.32			
	24-35	51	20	25-34	1.50-1.65	0.06-0.20	0.09-0.13	3.0-5.9	0.0-0.0	.32	.32			
	35-49	58	18	21-34	1.50-1.65	0.06-0.20	0.09-0.13	3.0-5.9	0.0-0.0	.32	.32			
	49-61	54	24	20-32	1.45-1.60	0.06-0.20	0.10-0.16	3.0-5.9	0.0-0.0	.28	.28			
	61-69	44	31	20-32	1.45-1.60	0.06-0.20	0.10-0.16	3.0-5.9	0.0-0.0	.28	.28			
	69-80	41	32	20-32	1.45-1.60	0.06-0.20	0.10-0.16	3.0-5.9	0.0-0.0	.28	.28			
991: Abbyville, rarely flooded-----	0-8	68	19	13-19	1.30-1.55	2.00-6.00	0.14-0.17	0.0-2.9	1.0-3.0	.32	.32	2	3	86
	8-15	55	21	20-28	1.50-1.65	0.06-0.20	0.09-0.13	3.0-5.9	0.0-0.5	.28	.28			
	15-24	47	19	25-34	1.50-1.65	0.06-0.20	0.09-0.13	3.0-5.9	0.0-0.0	.32	.32			
	24-35	51	20	25-34	1.50-1.65	0.06-0.20	0.09-0.13	3.0-5.9	0.0-0.0	.32	.32			
	35-49	58	18	21-34	1.50-1.65	0.06-0.20	0.09-0.13	3.0-5.9	0.0-0.0	.32	.32			
	49-61	54	24	20-32	1.45-1.60	0.06-0.20	0.10-0.16	3.0-5.9	0.0-0.0	.28	.28			
	61-69	44	31	20-32	1.45-1.60	0.06-0.20	0.10-0.16	3.0-5.9	0.0-0.0	.28	.28			
	69-80	41	32	20-32	1.45-1.60	0.06-0.20	0.10-0.16	3.0-5.9	0.0-0.0	.28	.28			
Kisiwa, occasionally flooded-----	0-4	51	29	18-26	1.30-1.40	0.60-2.00	0.20-0.22	0.0-2.9	1.0-4.0	.43	.43	2	6	48
	4-7	49	30	18-28	1.30-1.50	0.60-2.00	0.20-0.22	0.0-2.9	1.0-4.0	.32	.32			
	7-14	42	27	27-40	1.30-1.60	0.00-0.06	0.15-0.18	3.0-5.9	0.0-1.0	.37	.37			
	14-23	39	24	27-37	1.35-1.60	0.00-0.06	0.15-0.18	3.0-5.9	0.0-1.0	.37	.37			
	23-31	30	29	26-45	1.30-1.60	0.00-0.06	0.08-0.15	3.0-5.9	0.0-1.0	.37	.37			
	31-40	27	29	26-45	1.30-1.60	0.00-0.06	0.08-0.15	3.0-5.9	0.0-1.0	.37	.37			
	40-46	45	28	26-45	1.45-1.60	0.00-0.06	0.08-0.15	3.0-5.9	0.0-0.5	.37	.37			
	46-52	58	29	5-18	1.30-1.70	2.00-6.00	0.11-0.17	0.0-2.9	0.0-0.5	.20	.20			
	52-58	64	27	5-18	1.30-1.70	2.00-6.00	0.11-0.17	0.0-2.9	0.0-0.5	.20	.20			
	58-65	61	30	0-12	1.30-1.70	5.95-19.98	0.05-0.10	0.0-2.9	0.0-0.5	.10	.10			
	65-80	97	3	0-12	1.30-1.40	5.95-19.98	0.05-0.10	0.0-2.9	0.0-0.5	.10	.10			
1004: Albion-----	0-9	72	18	7-15	1.35-1.45	2.00-6.00	0.16-0.18	0.0-2.9	1.0-2.0	.20	.24	4	3	86
	9-16	80	7	10-18	1.45-1.55	2.00-6.00	0.12-0.18	0.0-2.9	1.0-2.0	.20	.24			
	16-27	84	5	10-18	1.45-1.55	2.00-6.00	0.12-0.18	0.0-2.9	1.0-2.0	.20	.24			
	27-48	87	6	4-15	1.45-1.60	2.00-6.00	0.09-0.12	0.0-2.9	0.0-0.5	.17	.20			
	48-80	93	3	2-10	1.50-1.65	5.95-19.98	0.03-0.10	0.0-2.9	0.0-0.0	.15	.32			
1011: Albion-----	0-9	72	18	7-15	1.35-1.45	2.00-6.00	0.16-0.18	0.0-2.9	1.0-2.0	.20	.24	4	3	86
	9-16	80	7	10-18	1.45-1.55	2.00-6.00	0.12-0.18	0.0-2.9	1.0-2.0	.20	.24			
	16-27	84	5	10-18	1.45-1.55	2.00-6.00	0.12-0.18	0.0-2.9	1.0-2.0	.20	.24			
	27-48	87	6	4-15	1.45-1.60	2.00-6.00	0.09-0.12	0.0-2.9	0.0-0.5	.17	.20			
	48-80	90	7	2-10	1.50-1.65	5.95-19.98	0.03-0.10	0.0-2.9	0.0-0.0	.15	.32			
Shellabarger--	0-7	64	27	8-12	1.35-1.50	2.00-6.00	0.13-0.21	0.0-2.9	1.0-2.0	.20	.20	5	3	86
	7-11	59	24	17-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-1.2	.28	.32			
	11-19	64	13	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.28	.32			
	19-33	69	8	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.28	.32			
	33-47	80	4	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	47-59	86	3	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	59-73	89	2	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	73-80	90	3	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
1057: Aquents-----	0-3	14	55	27-35	1.20-1.40	0.60-2.00	0.21-0.23	3.0-5.9	0.0-4.0	.37	.37	5	3	86
	3-8	60	17	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.28	.32			
	8-12	96	4	0-1	1.60-1.70	5.95-19.98	0.02-0.05	0.0-2.9	0.0-0.1	.05	.05			
	12-80	99	1	0-1	1.60-1.70	5.95-19.98	0.02-0.05	0.0-2.9	0.0-0.0	.05	.05			
1061: Arents, Earthen Dam-	---	---	---	---	---	---	---	---	---	---	---	-	---	---
1062: Arents, Landfill----	---	---	---	---	---	---	---	---	---	---	---	-	---	---
1070: Avans-----	0-5	32	48	15-26	1.30-1.50	0.60-2.00	0.20-0.24	0.0-2.9	1.0-3.0	.37	.37	5	5	56
	5-10	31	49	15-26	1.30-1.50	0.60-2.00	0.20-0.24	0.0-2.9	1.0-3.0	.32	.32			
	10-14	25	53	13-26	1.40-1.60	0.60-2.00	0.20-0.24	0.0-2.9	1.0-3.0	.32	.32			
	14-19	25	45	27-34	1.30-1.65	0.60-2.00	0.15-0.20	3.0-5.9	1.0-3.0	.37	.37			
	19-30	27	46	26-34	1.30-1.65	0.60-2.00	0.15-0.20	3.0-5.9	0.0-1.0	.37	.37			
	30-43	31	47	18-26	1.40-1.60	0.60-2.00	0.18-0.21	0.0-2.9	0.0-1.0	.32	.32			
	43-53	26	53	18-26	1.40-1.60	0.60-2.00	0.18-0.21	0.0-2.9	0.0-0.5	.32	.32			
	53-65	28	50	18-26	1.40-1.60	0.60-2.00	0.18-0.21	0.0-2.9	0.0-0.2	.32	.32			
	65-80	30	49	18-26	1.40-1.60	0.60-2.00	0.18-0.21	0.0-2.9	0.0-0.2	.32	.32			
1071: Avans-----	0-5	32	48	15-26	1.30-1.50	0.60-2.00	0.20-0.24	0.0-2.9	1.0-3.0	.37	.37	5	5	56
	5-10	31	49	15-26	1.30-1.50	0.60-2.00	0.20-0.24	0.0-2.9	1.0-3.0	.32	.32			
	10-14	25	53	13-26	1.40-1.60	0.60-2.00	0.20-0.24	0.0-2.9	1.0-3.0	.32	.32			
	14-19	25	45	27-34	1.30-1.65	0.60-2.00	0.15-0.20	3.0-5.9	1.0-3.0	.37	.37			
	19-30	27	46	26-34	1.30-1.65	0.60-2.00	0.15-0.20	3.0-5.9	0.0-1.0	.37	.37			
	30-43	31	47	18-26	1.40-1.60	0.60-2.00	0.18-0.21	0.0-2.9	0.0-1.0	.32	.32			
	43-53	26	53	18-26	1.40-1.60	0.60-2.00	0.18-0.21	0.0-2.9	0.0-0.5	.32	.32			
	53-65	28	50	18-26	1.40-1.60	0.60-2.00	0.18-0.21	0.0-2.9	0.0-0.2	.32	.32			
	65-80	30	49	18-26	1.40-1.60	0.60-2.00	0.18-0.21	0.0-2.9	0.0-0.2	.32	.32			



PHYSICAL PROPERTIES OF THE SOILS--Continued  
Reno County, Kansas: Published

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
1072: Avans-----	0-5	32	48	15-26	1.30-1.50	0.60-2.00	0.20-0.24	0.0-2.9	1.0-3.0	.37	.37	5	5	56
	5-10	31	49	15-26	1.30-1.50	0.60-2.00	0.20-0.24	0.0-2.9	1.0-3.0	.32	.32			
	10-14	25	53	13-26	1.40-1.60	0.60-2.00	0.20-0.24	0.0-2.9	1.0-3.0	.32	.32			
	14-19	25	45	27-34	1.30-1.65	0.60-2.00	0.15-0.20	3.0-5.9	1.0-3.0	.37	.37			
	19-30	27	46	26-34	1.30-1.65	0.60-2.00	0.15-0.20	3.0-5.9	0.0-1.0	.37	.37			
	30-43	31	47	18-26	1.40-1.60	0.60-2.00	0.18-0.21	0.0-2.9	0.0-1.0	.32	.32			
	43-53	26	53	18-26	1.40-1.60	0.60-2.00	0.18-0.21	0.0-2.9	0.0-0.5	.32	.32			
	53-65	28	50	18-26	1.40-1.60	0.60-2.00	0.18-0.21	0.0-2.9	0.0-0.2	.32	.32			
	65-80	30	49	18-26	1.40-1.60	0.60-2.00	0.18-0.21	0.0-2.9	0.0-0.2	.32	.32			
1191: Blazefork----	0-3	6	58	35-50	1.20-1.45	0.20-0.60	0.21-0.23	6.0-8.9	2.0-4.0	.37	.37	5	7	38
	3-7	6	57	35-50	1.35-1.45	0.20-0.60	0.21-0.23	6.0-8.9	2.0-4.0	.37	.37			
	7-14	7	50	35-50	1.25-1.55	0.06-0.20	0.11-0.14	6.0-8.9	1.0-2.0	.43	.43			
	14-22	6	50	35-50	1.25-1.55	0.06-0.20	0.11-0.14	6.0-8.9	1.0-2.0	.43	.43			
	22-29	7	48	35-50	1.25-1.55	0.06-0.20	0.11-0.14	6.0-8.9	1.0-2.0	.43	.43			
	29-34	8	48	35-50	1.25-1.55	0.06-0.20	0.11-0.14	6.0-8.9	0.5-2.0	.43	.43			
	34-40	8	50	35-50	1.30-1.55	0.20-0.60	0.15-0.18	3.0-5.9	0.5-1.0	.32	.32			
	40-48	16	49	35-50	1.35-1.55	0.20-0.60	0.15-0.18	3.0-5.9	0.2-1.0	.32	.32			
	48-61	23	48	26-35	1.35-1.55	0.20-0.60	0.15-0.18	3.0-5.9	0.1-1.0	.32	.32			
	61-80	31	43	18-27	1.35-1.55	0.20-0.60	0.15-0.18	3.0-5.9	0.1-1.0	.32	.32			
1192: Blazefork----	0-3	6	58	35-50	1.20-1.45	0.20-0.60	0.21-0.23	6.0-8.9	2.0-4.0	.37	.37	5	7	38
	3-7	6	57	35-50	1.35-1.45	0.20-0.60	0.21-0.23	6.0-8.9	2.0-4.0	.37	.37			
	7-14	7	50	35-50	1.25-1.55	0.06-0.20	0.11-0.14	6.0-8.9	1.0-2.0	.43	.43			
	14-22	6	50	35-50	1.25-1.55	0.06-0.20	0.11-0.14	6.0-8.9	1.0-2.0	.43	.43			
	22-29	7	48	35-50	1.25-1.55	0.06-0.20	0.11-0.14	6.0-8.9	1.0-2.0	.43	.43			
	29-34	8	48	35-50	1.25-1.55	0.06-0.20	0.11-0.14	6.0-8.9	0.5-2.0	.43	.43			
	34-40	8	50	35-50	1.30-1.55	0.20-0.60	0.15-0.18	3.0-5.9	0.5-1.0	.32	.32			
	40-48	16	49	35-50	1.35-1.55	0.20-0.60	0.15-0.18	3.0-5.9	0.2-1.0	.32	.32			
	48-61	23	48	27-35	1.35-1.55	0.20-0.60	0.15-0.18	3.0-5.9	0.1-1.0	.32	.32			
	61-80	31	43	18-27	1.35-1.55	0.20-0.60	0.15-0.18	3.0-5.9	0.1-1.0	.32	.32			
Kaskan-----	0-7	34	44	18-26	1.35-1.45	0.60-2.00	0.20-0.23	0.0-2.9	2.0-4.0	.28	.28	4	6	48
	7-17	25	46	27-35	1.35-1.45	0.60-2.00	0.21-0.23	3.0-5.9	2.0-4.0	.37	.37			
	17-24	52	28	18-26	1.45-1.55	0.60-2.00	0.17-0.19	0.0-2.9	1.0-2.0	.28	.28			
	24-35	63	25	10-17	1.45-1.55	2.00-6.00	0.14-0.17	0.0-2.9	0.0-1.0	.24	.24			
	35-41	79	15	0-8	1.50-1.60	5.95-19.98	0.06-0.09	0.0-2.9	0.0-0.5	.10	.10			
	41-47	93	4	0-8	1.50-1.60	5.95-19.98	0.06-0.09	0.0-2.9	0.0-0.5	.10	.10			
	47-66	94	4	0-8	1.50-1.60	5.95-19.98	0.06-0.09	0.0-2.9	0.0-0.5	.10	.10			
	66-80	97	2	0-2	1.55-1.65	5.95-19.98	0.02-0.05	0.0-2.9	0.0-0.0	.05	.05			
1200: Buhler-----	0-3	10	50	28-45	1.20-1.55	0.00-0.06	0.18-0.21	6.0-8.9	2.0-6.0	.43	.43	2	7	38
	3-8	9	51	28-45	1.20-1.55	0.00-0.06	0.18-0.21	6.0-8.9	2.0-4.0	.43	.43			
	8-12	31	54	15-26	1.30-1.55	0.20-0.60	0.20-0.22	0.0-2.9	1.0-2.0	.28	.28			
	12-16	25	52	15-26	1.30-1.55	0.20-0.60	0.20-0.22	0.0-2.9	1.0-2.0	.28	.28			
	16-24	20	49	20-40	1.25-1.55	0.00-0.06	0.14-0.20	6.0-8.9	1.0-2.0	.43	.43			
	24-36	16	47	20-40	1.25-1.55	0.00-0.06	0.14-0.20	6.0-8.9	0.5-2.0	.43	.43			
	36-42	16	46	20-40	1.30-1.55	0.00-0.06	0.14-0.20	6.0-8.9	0.5-2.0	.43	.43			
	42-50	22	38	27-45	1.30-1.60	0.00-0.06	0.14-0.18	6.0-8.9	0.3-2.0	.37	.37			
	50-58	44	28	27-45	1.50-1.60	0.00-0.06	0.14-0.18	6.0-8.9	0.0-2.0	.37	.37			
	58-76	68	15	10-26	1.35-1.70	0.60-2.00	0.14-0.17	0.0-2.9	0.0-0.5	.24	.24			
	76-80	51	28	10-26	1.35-1.70	0.60-2.00	0.14-0.17	0.0-2.9	0.0-0.5	.24	.24			
Blazefork----	0-3	6	58	35-50	1.20-1.45	0.20-0.60	0.21-0.23	6.0-8.9	2.0-4.0	.37	.37	5	7	38
	3-7	6	57	35-50	1.35-1.45	0.20-0.60	0.21-0.23	6.0-8.9	2.0-4.0	.37	.37			
	7-14	7	50	35-50	1.25-1.55	0.06-0.20	0.11-0.14	6.0-8.9	1.0-2.0	.43	.43			
	14-22	6	50	35-50	1.25-1.55	0.06-0.20	0.11-0.14	6.0-8.9	1.0-2.0	.43	.43			
	22-29	7	48	35-50	1.25-1.55	0.06-0.20	0.11-0.14	6.0-8.9	1.0-2.0	.43	.43			
	29-34	8	48	35-50	1.25-1.55	0.06-0.20	0.11-0.14	6.0-8.9	0.5-2.0	.43	.43			
	34-40	8	50	35-50	1.30-1.55	0.20-0.60	0.15-0.18	3.0-5.9	0.5-1.0	.32	.32			
	40-48	16	49	35-50	1.35-1.55	0.20-0.60	0.15-0.18	3.0-5.9	0.2-1.0	.32	.32			
	48-61	23	48	26-35	1.35-1.55	0.20-0.60	0.15-0.18	3.0-5.9	0.1-1.0	.32	.32			
	61-80	31	43	18-27	1.35-1.55	0.20-0.60	0.15-0.18	3.0-5.9	0.1-1.0	.32	.32			
1324: Carway-----	0-7	67	20	10-16	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.5-1.0	.20	.20	5	3	86
	7-10	61	18	20-29	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	10-15	61	18	20-29	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	15-22	62	19	18-29	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	22-35	62	19	18-29	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	35-40	34	37	28-45	1.40-1.60	0.00-0.06	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	40-54	33	32	30-45	1.40-1.60	0.00-0.06	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	54-63	29	31	30-45	1.40-1.60	0.00-0.06	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	63-72	30	32	30-45	1.40-1.60	0.00-0.06	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	72-80	35	33	15-34	1.45-1.65	0.60-2.00	0.13-0.18	0.0-2.9	0.0-0.5	.28	.28			
Carbika-----	0-11	27	55	10-22	1.45-1.55	0.60-2.00	0.15-0.18	0.0-2.9	1.0-2.0	.24	.24	5	5	56
	11-15	30	30	35-42	1.40-1.60	0.00-0.06	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	15-22	30	32	35-42	1.40-1.60	0.00-0.06	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	22-34	34	32	21-35	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	34-41	34	32	21-35	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	41-60	35	33	21-35	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	60-80	34	32	21-35	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			



PHYSICAL PROPERTIES OF THE SOILS--Continued  
Reno County, Kansas: Published

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Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
1357: Carway-----	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
	0-7	84	10	2-10	1.50-1.60	6.00-19.99	0.05-0.09	0.0-2.9	0.5-1.0	.17	.17	5	2	134
	7-10	61	19	20-29	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	10-15	61	18	20-29	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	15-22	64	17	18-29	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	22-35	63	18	18-29	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	35-40	34	36	28-45	1.40-1.60	0.00-0.06	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	40-54	32	33	30-45	1.40-1.60	0.00-0.06	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	54-63	30	30	30-45	1.40-1.60	0.00-0.06	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	63-72	30	32	30-45	1.40-1.60	0.00-0.06	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	72-80	28	40	15-34	1.45-1.65	0.60-2.00	0.13-0.18	0.0-2.9	0.0-0.5	.28	.28			
Dillhut-----	0-10	92	6	1-3	1.40-1.55	6.00-19.99	0.02-0.10	0.0-2.9	0.0-1.0	.15	.15	4	1	220
	10-29	94	4	1-3	1.40-1.55	5.95-19.98	0.02-0.10	0.0-2.9	0.0-0.5	.15	.15			
	29-35	70	16	13-30	1.40-1.55	0.60-2.00	0.12-0.15	0.0-2.9	0.0-0.0	.24	.24			
	35-43	75	15	10-30	1.40-1.55	0.60-2.00	0.12-0.15	0.0-2.9	0.0-0.0	.24	.24			
	43-54	26	35	35-43	1.55-1.65	0.00-0.06	0.13-0.17	3.0-5.9	0.0-0.0	.32	.32			
	54-66	30	31	35-43	1.55-1.65	0.00-0.06	0.13-0.17	3.0-5.9	0.0-0.0	.32	.32			
	66-80	35	26	35-43	1.55-1.65	0.00-0.06	0.13-0.17	3.0-5.9	0.0-0.0	.32	.32			
Solvay-----	0-5	79	12	9-16	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.5-2.0	.17	.17	5	3	86
	5-14	58	23	13-34	1.50-1.80	0.20-2.00	0.15-0.18	0.0-2.9	0.0-0.8	.28	.28			
	14-23	57	26	13-34	1.50-1.80	0.20-2.00	0.15-0.18	0.0-2.9	0.0-0.5	.28	.28			
	23-37	56	31	13-34	1.50-1.80	0.20-2.00	0.15-0.18	0.0-2.9	0.0-0.5	.28	.28			
	37-58	77	12	7-22	1.50-1.80	2.00-6.00	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24			
	58-76	87	3	7-22	1.50-1.80	2.00-6.00	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24			
	76-80	86	5	7-22	1.50-1.80	2.00-6.00	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24			
1359: Clark-----	0-11	37	41	15-27	1.35-1.45	0.60-2.00	0.17-0.22	3.0-5.9	1.0-2.0	.28	.28	5	4L	86
	11-16	33	40	18-35	1.35-1.70	0.60-2.00	0.17-0.19	3.0-5.9	0.5-2.0	.32	.32			
	16-28	29	50	18-35	1.35-1.70	0.60-2.00	0.14-0.19	3.0-5.9	0.5-1.0	.32	.32			
	28-45	45	38	10-25	1.35-1.70	0.60-2.00	0.14-0.19	3.0-5.9	0.5-1.0	.32	.32			
	45-65	47	44	7-20	1.35-1.70	0.60-2.00	0.14-0.19	3.0-5.9	0.0-1.0	.32	.32			
	65-80	26	65	7-20	1.35-1.70	0.60-2.00	0.14-0.19	3.0-5.9	0.0-1.0	.32	.32			
Ost-----	0-8	35	44	10-27	1.40-1.54	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	8-12	32	41	20-35	1.35-1.45	0.20-0.60	0.15-0.19	3.0-5.9	1.0-2.0	.32	.32			
	12-18	32	41	20-35	1.35-1.45	0.20-0.60	0.15-0.19	3.0-5.9	1.0-2.0	.32	.32			
	18-23	23	48	18-35	1.40-1.52	0.20-0.60	0.15-0.19	3.0-5.9	0.5-1.0	.32	.32			
	23-38	26	47	5-30	1.40-1.65	0.20-0.60	0.13-0.19	0.0-2.9	0.0-0.6	.32	.37			
	38-54	33	44	5-30	1.40-1.65	0.20-0.60	0.13-0.19	0.0-2.9	0.0-0.5	.32	.37			
	54-80	44	35	5-30	1.40-1.65	0.20-0.60	0.13-0.19	0.0-2.9	0.0-0.5	.32	.37			
1428: Crete-----	0-5	24	52	20-27	1.20-1.40	0.60-2.00	0.22-0.24	3.0-5.9	2.0-4.0	.37	.37	5	6	48
	5-9	20	49	27-35	1.20-1.40	0.20-0.60	0.21-0.23	6.0-8.9	1.0-3.0	.37	.37			
	9-19	7	48	35-55	1.10-1.30	0.06-0.20	0.12-0.20	6.0-8.9	0.5-2.0	.37	.37			
	19-27	7	48	35-55	1.10-1.30	0.06-0.20	0.12-0.20	6.0-8.9	0.5-2.0	.37	.37			
	27-38	7	48	35-55	1.10-1.30	0.06-0.20	0.12-0.20	6.0-8.9	0.5-2.0	.37	.37			
	38-48	20	48	25-40	1.20-1.40	0.20-2.00	0.18-0.22	6.0-8.9	0.5-1.0	.43	.43			
	48-80	20	48	25-40	1.20-1.40	0.20-2.00	0.18-0.22	6.0-8.9	0.5-1.0	.43	.43			
1429: Crete-----	0-5			20-27	1.20-1.40	0.60-2.00	0.22-0.24	3.0-5.9	2.0-4.0	.37	.37	5	6	48
	5-9			27-35	1.20-1.40	0.20-0.60	0.21-0.23	6.0-8.9	1.0-3.0	.37	.37			
	9-19			35-55	1.10-1.30	0.06-0.20	0.12-0.20	6.0-8.9	0.5-2.0	.37	.37			
	19-27			35-55	1.10-1.30	0.06-0.20	0.12-0.20	6.0-8.9	0.5-2.0	.37	.37			
	27-38			35-55	1.10-1.30	0.06-0.20	0.12-0.20	6.0-8.9	0.5-2.0	.37	.37			
	38-48			25-40	1.20-1.40	0.20-2.00	0.18-0.22	6.0-8.9	0.5-1.0	.43	.43			
	48-80			25-40	1.20-1.40	0.20-2.00	0.18-0.22	6.0-8.9	0.5-1.0	.43	.43			
1553: Darlow-----	0-5	42	48	8-20	1.30-1.55	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.43	.43	2	5	56
	5-8	36	53	8-20	1.30-1.70	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.32	.32			
	8-14	32	47	20-30	1.30-1.45	0.20-0.60	0.09-0.13	3.0-5.9	1.0-3.0	.28	.28			
	14-20	26	46	20-30	1.30-1.45	0.20-0.60	0.09-0.13	3.0-5.9	0.8-3.0	.28	.28			
	20-26	30	44	20-30	1.30-1.45	0.20-0.60	0.09-0.13	3.0-5.9	0.2-3.0	.28	.28			
	26-33	34	42	20-35	1.30-1.50	0.00-0.06	0.09-0.13	0.0-2.9	0.0-2.0	.28	.28			
	33-44	38	38	20-35	1.30-1.50	0.00-0.06	0.09-0.13	0.0-2.9	0.0-2.0	.28	.28			
	44-53	39	36	12-27	1.30-1.60	0.20-0.60	0.10-0.16	0.0-2.9	0.0-1.0	.24	.24			
	53-68	49	35	12-27	1.30-1.80	0.20-0.60	0.10-0.16	0.0-2.9	0.0-1.0	.24	.24			
	68-80	75	14	8-12	1.50-1.80	0.60-2.00	0.02-0.10	0.0-2.9	0.0-0.5	.20	.20			
Elmer-----	0-6	53	36	10-17	1.50-1.70	2.00-6.00	0.17-0.20	0.0-2.9	1.0-2.0	.32	.32	2	3	86
	6-9	51	34	10-17	1.50-1.70	2.00-6.00	0.17-0.20	0.0-2.9	1.0-2.0	.28	.28			
	9-19	53	30	10-17	1.50-1.75	2.00-6.00	0.17-0.20	0.0-2.9	1.0-2.0	.28	.28			
	19-26	60	21	17-25	1.55-1.65	0.20-0.60	0.12-0.16	0.0-2.9	0.5-1.0	.32	.32			
	26-37	65	18	17-25	1.55-1.70	0.20-0.60	0.12-0.16	0.0-2.9	0.0-1.0	.32	.32			
	37-43	40	35	20-28	1.50-1.60	0.06-0.20	0.12-0.16	6.0-8.9	0.0-0.5	.37	.37			
	43-51	25	47	20-28	1.50-1.60	0.06-0.20	0.12-0.16	6.0-8.9	0.0-0.5	.37	.37			
	51-61	52	28	14-22	1.60-1.80	0.20-6.00	0.10-0.16	0.0-2.9	0.0-0.5	.28	.28			
	61-72	68	17	14-22	1.60-1.80	0.20-6.00	0.10-0.16	0.0-2.9	0.0-0.5	.28	.28			
	72-80	72	14	14-20	1.60-1.80	0.20-6.00	0.10-0.16	0.0-2.9	0.0-0.5	.28	.28			
1554: Dillhut-----	0-10	92	6	1-3	1.40-1.55	6.00-19.99	0.02-0.10	0.0-2.9	0.0-1.0	.15	.15	4	1	220
	10-29	94	4	1-3	1.40-1.55	5.95-19.98	0.02-0.10	0.0-2.9	0.0-0.5	.15	.15			
	29-35	70	16	13-30	1.40-1.55	0.60-2.00	0.12-0.15	0.0-2.9	0.0-0.0	.24	.24			
	35-43	75	15	10-30	1.40-1.55	0.60-2.00	0.12-0.15	0.0-2.9	0.0-0.0	.24	.24			
	43-54	26	35	35-43	1.55-1.65	0.00-0.06	0.13-0.17	3.0-5.9	0.0-0.0	.32	.32			
	54-66	30	31	35-43	1.55-1.65	0.00-0.06	0.13-0.17	3.0-5.9	0.0-0.0	.32	.32			
	66-80	35	26	35-43	1.55-1.65	0.00-0.06	0.13-0.17	3.0-5.9	0.0-0.0	.32	.32			



PHYSICAL PROPERTIES OF THE SOILS--Continued  
Reno County, Kansas: Published

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
1555: Dillhut-----	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
	0-4	92	6	1-3	1.40-1.55	6.00-19.99	0.02-0.10	0.0-2.9	0.0-1.0	.15	.15	5	1	220
	4-9	95	4	1-3	1.40-1.55	5.95-19.98	0.02-0.10	0.0-2.9	0.0-1.0	.15	.15			
	9-18	96	3	1-3	1.40-1.55	5.95-19.98	0.02-0.10	0.0-2.9	0.0-0.5	.15	.15			
	18-26	93	5	1-3	1.40-1.55	5.95-19.98	0.02-0.10	0.0-2.9	0.0-0.5	.15	.15			
	26-41	70	16	13-30	1.40-1.55	0.60-2.00	0.12-0.15	0.0-2.9	0.0-0.0	.24	.24			
	41-55	75	15	10-22	1.55-1.65	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.0	.17	.17			
	55-65	77	13	9-17	1.55-1.65	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.0	.17	.17			
	65-70	57	25	10-20	1.55-1.65	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.0	.17	.17			
	70-80	76	15	5-15	1.45-1.60	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.0	.15	.15			
Plev-----	0-4	86	10	3-8	1.40-1.55	6.00-19.99	0.02-0.10	0.0-2.9	0.0-1.0	.17	.17	5	2	134
	4-12	88	10	1-5	1.40-1.55	5.95-19.98	0.02-0.10	0.0-2.9	0.0-0.5	.15	.15			
	12-35	94	5	0-2	1.40-1.55	5.95-19.98	0.02-0.10	0.0-2.9	0.0-0.0	.10	.10			
	35-46	96	4	0-2	1.40-1.55	5.95-19.98	0.02-0.10	0.0-2.9	0.0-0.0	.10	.10			
	46-57	70	14	10-27	1.55-1.65	0.60-2.00	0.08-0.10	0.0-2.9	0.0-0.0	.20	.20			
	57-75	79	9	10-27	1.55-1.65	0.60-2.00	0.08-0.10	0.0-2.9	0.0-0.0	.20	.20			
	75-80	84	11	4-6	1.45-1.60	5.95-19.98	0.04-0.10	0.0-2.9	0.0-0.0	.15	.15			
1556: Dillhut-----	0-4	92	6	1-3	1.40-1.55	6.00-19.99	0.02-0.10	0.0-2.9	0.0-1.0	.15	.15	5	1	220
	4-9	95	4	1-3	1.40-1.55	5.95-19.98	0.02-0.10	0.0-2.9	0.0-1.0	.15	.15			
	9-18	96	3	1-3	1.40-1.55	5.95-19.98	0.02-0.10	0.0-2.9	0.0-0.5	.15	.15			
	18-26	93	5	1-3	1.40-1.55	5.95-19.98	0.02-0.10	0.0-2.9	0.0-0.5	.15	.15			
	26-41	70	16	13-30	1.40-1.55	0.60-2.00	0.12-0.15	0.0-2.9	0.0-0.0	.24	.24			
	41-55	75	15	10-22	1.55-1.65	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.0	.17	.17			
	55-65	77	13	9-17	1.55-1.65	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.0	.17	.17			
	65-70	57	25	10-20	1.55-1.65	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.0	.17	.17			
	70-80	76	15	5-15	1.45-1.60	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.0	.15	.15			
Solvay-----	0-5	79	12	9-16	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.5-2.0	.20	.20	5	3	86
	5-14	58	23	13-34	1.50-1.80	0.20-2.00	0.15-0.18	0.0-2.9	0.0-0.8	.28	.28			
	14-23	57	26	13-34	1.50-1.80	0.20-2.00	0.15-0.18	0.0-2.9	0.0-0.5	.28	.28			
	23-37	56	31	13-34	1.50-1.80	0.20-2.00	0.15-0.18	0.0-2.9	0.0-0.5	.28	.28			
	37-58	77	12	7-22	1.50-1.80	2.00-6.00	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24			
	58-76	87	3	7-22	1.50-1.80	2.00-6.00	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24			
	76-80	86	5	7-22	1.50-1.80	2.00-6.00	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24			
1725: Farnum-----	0-5	43	40	14-27	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	56
	5-15	42	38	14-27	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28			
	15-21	40	37	20-27	1.40-1.50	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.5	.28	.28			
	21-34	57	18	20-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	0.0-0.5	.28	.28			
	34-48	38	36	25-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	0.0-0.5	.28	.28			
	48-61	34	37	25-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	0.0-0.5	.28	.28			
	61-73	35	38	25-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	0.0-0.5	.28	.28			
	73-80	39	37	12-29	1.40-1.55	0.60-2.00	0.13-0.16	0.0-2.9	0.0-0.5	.28	.28			
Funmar-----	0-6	42	38	14-26	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	56
	6-12	41	37	14-26	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28			
	12-17	38	36	22-34	1.40-1.60	0.20-0.60	0.17-0.19	0.0-2.9	1.0-2.0	.32	.32			
	17-26	34	37	22-34	1.40-1.60	0.20-0.60	0.17-0.19	0.0-2.9	1.0-2.0	.32	.32			
	26-32	38	36	22-34	1.40-1.60	0.20-0.60	0.17-0.19	0.0-2.9	0.5-2.0	.32	.32			
	32-38	20	48	26-34	1.35-1.45	0.20-0.60	0.20-0.22	0.0-2.9	1.0-3.0	.32	.32			
	38-54	8	54	28-45	1.40-1.60	0.06-0.20	0.10-0.17	3.0-5.9	0.0-0.5	.37	.37			
	54-66	8	56	28-45	1.40-1.60	0.06-0.20	0.10-0.17	3.0-5.9	0.0-0.5	.37	.37			
	66-80	8	54	26-45	1.50-1.60	0.06-0.20	0.10-0.17	0.0-2.9	0.0-0.5	.37	.37			
1727: Funmar-----	0-6	44	36	14-26	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28	5	5	56
	6-12	44	34	14-26	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28			
	12-17	46	29	22-34	1.40-1.60	0.20-0.60	0.17-0.19	0.0-2.9	1.0-2.0	.32	.32			
	17-26	40	31	22-34	1.40-1.60	0.20-0.60	0.17-0.19	0.0-2.9	1.0-2.0	.32	.32			
	26-32	25	49	22-34	1.40-1.60	0.20-0.60	0.17-0.19	0.0-2.9	0.5-2.0	.32	.32			
	32-38	16	52	26-34	1.35-1.45	0.20-0.60	0.20-0.22	0.0-2.9	1.0-3.0	.32	.32			
	38-54	14	48	28-45	1.40-1.60	0.06-0.20	0.10-0.17	3.0-5.9	0.0-0.5	.37	.37			
	54-66	18	46	28-45	1.40-1.60	0.06-0.20	0.10-0.17	3.0-5.9	0.0-0.5	.37	.37			
	66-80	14	48	26-45	1.50-1.60	0.06-0.20	0.10-0.17	0.0-2.9	0.0-0.5	.37	.37			
Taver-----	0-7	36	44	17-25	1.30-1.55	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	7-17	15	49	35-45	1.35-1.60	0.00-0.06	0.12-0.18	6.0-8.9	0.0-2.0	.37	.37			
	17-33	5	55	35-45	1.35-1.60	0.00-0.06	0.12-0.18	6.0-8.9	0.0-2.0	.37	.37			
	33-53	5	56	35-45	1.35-1.60	0.00-0.06	0.12-0.18	6.0-8.9	0.0-2.0	.37	.37			
	53-64	30	35	20-35	1.45-1.65	0.20-0.60	0.15-0.19	0.0-2.9	0.5-1.0	.28	.28			
	64-80	50	22	20-30	1.45-1.65	0.60-2.00	0.15-0.19	0.0-2.9	0.5-1.0	.28	.28			
1804: Geary-----	0-6			21-27	1.35-1.40	0.60-2.00	0.21-0.23	0.0-2.9	1.0-4.0	.32	.32	5	6	48
	6-14			15-35	1.30-1.40	0.60-2.00	0.18-0.22	3.0-5.9	1.0-3.0	.32	.32			
	14-25			27-35	1.35-1.40	0.60-2.00	0.15-0.20	3.0-5.9	1.0-2.0	.43	.43			
	25-37			27-35	1.35-1.40	0.60-2.00	0.15-0.20	3.0-5.9	1.0-2.0	.43	.43			
	37-51			27-35	1.35-1.40	0.60-2.00	0.15-0.20	3.0-5.9	1.0-2.0	.43	.43			
	51-80			15-35	1.35-1.40	0.60-2.00	0.14-0.20	3.0-5.9	0.5-1.0	.43	.43			
1807: Geary, Moderately Eroded-----	0-5			27-35	1.30-1.40	0.20-0.60	0.21-0.23	3.0-5.9	1.0-2.0	.37	.37	5	7	38
	5-19			27-35	1.35-1.50	0.60-2.00	0.18-0.20	3.0-5.9	0.5-2.0	.43	.43			
	19-43			27-35	1.35-1.50	0.60-2.00	0.18-0.20	3.0-5.9	0.5-2.0	.43	.43			
	43-50			15-27	1.30-1.40	0.60-2.00	0.20-0.22	3.0-5.9	0.0-0.5	.43	.43			
	50-80			15-27	1.30-1.40	0.60-2.00	0.20-0.22	3.0-5.9	0.0-0.5	.43	.43			



PHYSICAL PROPERTIES OF THE SOILS--Continued  
Reno County, Kansas: Published

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
1985:	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
Hayes-----	0-8	63	26	9-13	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.5-1.0	.20	.20	5	3	86
	8-14	65	20	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	14-23	65	19	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	23-34	65	20	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	34-42	67	20	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	42-47	66	20	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	47-56	61	18	19-28	1.40-1.60	0.20-0.60	0.15-0.18	0.0-2.9	0.0-0.5	.28	.28			
	56-69	8	50	28-45	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	69-80	34	37	28-45	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
1986:														
Hayes-----	0-8	85	7	1-9	1.50-1.60	6.00-19.99	0.07-0.11	0.0-2.9	0.5-1.0	.17	.17	5	2	134
	8-14	65	20	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	14-23	65	19	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	23-34	65	20	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	34-42	67	20	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	42-47	66	20	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	47-56	61	18	19-28	1.40-1.60	0.20-0.60	0.15-0.18	0.0-2.9	0.0-0.5	.28	.28			
	56-69	8	50	28-45	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	69-80	34	37	28-45	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
Solvay-----	0-5	79	16	3-8	1.50-1.60	2.00-6.00	0.07-0.11	0.0-2.9	0.5-1.0	.17	.17	5	2	134
	5-14	62	19	13-34	1.50-1.80	0.20-2.00	0.15-0.18	0.0-2.9	0.0-0.8	.28	.28			
	14-23	63	19	13-34	1.50-1.80	0.20-2.00	0.15-0.18	0.0-2.9	0.0-0.5	.28	.28			
	23-37	66	20	13-34	1.50-1.80	0.20-2.00	0.15-0.18	0.0-2.9	0.0-0.5	.28	.28			
	37-58	63	26	7-22	1.50-1.80	2.00-6.00	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24			
	58-76	83	6	7-22	1.50-1.80	2.00-6.00	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24			
	76-80	84	6	7-22	1.50-1.80	2.00-6.00	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24			
1987:														
Hayes-----	0-8	86	5	1-9	1.50-1.60	6.00-19.99	0.07-0.11	0.0-2.9	0.5-1.0	.17	.17	5	2	134
	8-14	79	6	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	14-23	76	8	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	23-34	78	6	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	34-42	81	5	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	42-47	74	12	8-17	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	47-56	67	13	19-28	1.40-1.60	0.20-0.60	0.15-0.18	0.0-2.9	0.0-0.5	.28	.28			
	56-69	11	48	28-45	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	69-80	30	40	28-45	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
Turon-----	0-8	88	8	1-5	1.40-1.55	6.00-19.99	0.02-0.10	0.0-2.9	0.0-1.0	.15	.15	5	1	220
	8-28	88	4	3-10	1.40-1.55	5.95-19.98	0.09-0.12	0.0-2.9	0.5-1.0	.17	.17			
	28-40	88	3	2-18	1.40-1.55	1.98-19.98	0.10-0.15	0.0-2.9	0.0-0.0	.24	.24			
	40-58	11	49	27-41	1.45-1.60	0.00-0.60	0.12-0.18	3.0-5.9	0.0-0.5	.32	.32			
	58-75	6	53	27-45	1.45-1.60	0.00-0.60	0.12-0.18	3.0-5.9	0.0-0.5	.32	.32			
	75-80	4	54	27-45	1.45-1.60	0.00-0.60	0.12-0.18	3.0-5.9	0.0-0.5	.32	.32			
2204:														
Jamash-----	0-4	22	46	30-40	1.30-1.60	0.20-0.60	0.18-0.22	3.0-5.9	1.0-3.0	.37	.37	2	7	38
	4-11	22	41	35-45	1.45-1.70	0.20-0.60	0.14-0.18	3.0-5.9	1.0-3.0	.37	.37			
	11-15	9	62	28-40	1.45-1.70	0.00-0.06	0.13-0.16	6.0-8.9	0.5-1.0	.32	.32			
	15-28	14	61	---	1.85-2.00	0.06-0.20	---	---	---	---	---			
	28-80	10	64	---	1.85-2.00	0.06-0.20	---	---	---	---	---			
Piedmont-----	0-4	26	44	27-35	1.30-1.60	0.20-0.60	0.15-0.22	3.0-5.9	1.0-3.0	.37	.37	3	7	38
	4-7	26	44	27-35	1.30-1.60	0.20-0.60	0.15-0.22	3.0-5.9	1.0-3.0	.43	.43			
	7-13	18	35	32-50	1.45-1.70	0.20-0.60	0.15-0.22	3.0-5.9	1.0-3.0	.43	.43			
	13-20	8	37	32-60	1.45-1.70	0.20-0.60	0.15-0.22	3.0-5.9	1.0-3.0	.43	.43			
	20-24	5	44	35-55	1.35-1.70	0.00-0.06	0.12-0.22	6.0-8.9	0.5-1.0	.43	.43			
	24-32	4	55	35-55	1.35-1.70	0.00-0.06	0.06-0.18	6.0-8.9	0.5-1.0	.37	.37			
	32-80			---	1.85-2.00	0.06-0.20	---	---	---	---	---			
2205:														
Jamash-----	0-4	22	46	30-40	1.30-1.60	0.20-0.60	0.18-0.22	3.0-5.9	1.0-3.0	.37	.37	2	7	38
	4-11	22	41	35-45	1.45-1.70	0.20-0.60	0.14-0.18	3.0-5.9	1.0-3.0	.37	.37			
	11-15	9	62	28-40	1.45-1.70	0.00-0.06	0.13-0.16	6.0-8.9	0.5-1.0	.32	.32			
	15-28	14	61	---	1.85-2.00	0.06-0.20	---	---	---	---	---			
	28-80	10	64	---	1.85-2.00	0.06-0.20	---	---	---	---	---			
Piedmont-----	0-4	26	44	27-35	1.30-1.60	0.20-0.60	0.15-0.22	3.0-5.9	1.0-3.0	.37	.37	3	7	38
	4-7	26	44	27-35	1.30-1.60	0.20-0.60	0.15-0.22	3.0-5.9	1.0-3.0	.43	.43			
	7-13	18	35	32-50	1.45-1.70	0.20-0.60	0.15-0.22	3.0-5.9	1.0-3.0	.43	.43			
	13-20	8	37	32-60	1.45-1.70	0.20-0.60	0.15-0.22	3.0-5.9	1.0-3.0	.43	.43			
	20-24	5	44	35-55	1.35-1.70	0.00-0.06	0.12-0.22	6.0-8.9	0.5-1.0	.43	.43			
	24-32	4	55	35-55	1.35-1.70	0.00-0.06	0.06-0.18	6.0-8.9	0.5-1.0	.37	.37			
	32-80			---	1.85-2.00	0.06-0.20	---	---	---	---	---			
2206:														
Jamash-----	0-4	22	46	30-40	1.30-1.60	0.20-0.60	0.18-0.22	3.0-5.9	1.0-3.0	.37	.37	2	7	38
	4-11	22	41	35-45	1.45-1.70	0.20-0.60	0.14-0.18	3.0-5.9	1.0-3.0	.37	.37			
	11-15	9	62	28-40	1.45-1.70	0.00-0.06	0.13-0.16	6.0-8.9	0.5-1.0	.32	.32			
	15-28	14	61	---	1.85-2.00	0.06-0.20	---	---	---	---	---			
	28-80	10	64	---	1.85-2.00	0.06-0.20	---	---	---	---	---			
Piedmont-----	0-4	26	44	27-35	1.30-1.60	0.20-0.60	0.15-0.22	3.0-5.9	1.0-3.0	.37	.37	3	7	38
	4-7	26	44	27-35	1.30-1.60	0.20-0.60	0.15-0.22	3.0-5.9	1.0-3.0	.43	.43			
	7-13	18	35	32-50	1.45-1.70	0.20-0.60	0.15-0.22	3.0-5.9	1.0-3.0	.43	.43			
	13-20	8	37	32-60	1.45-1.70	0.20-0.60	0.15-0.22	3.0-5.9	1.0-3.0	.43	.43			
	20-24	5	44	35-55	1.35-1.70	0.00-0.06	0.12-0.22	6.0-8.9	0.5-1.0	.43	.43			
	24-32	4	55	35-55	1.35-1.70	0.00-0.06	0.06-0.18	6.0-8.9	0.5-1.0	.37	.37			
	32-80			---	1.85-2.00	0.06-0.20	---	---	---	---	---			



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Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
2207: Jamash-----	0-4	22	46	30-40	1.30-1.60	0.20-0.60	0.18-0.22	3.0-5.9	1.0-3.0	.37	.37	2	7	38
	4-11	22	41	35-45	1.45-1.70	0.20-0.60	0.14-0.18	3.0-5.9	1.0-3.0	.37	.37			
	11-15	9	62	28-40	1.45-1.70	0.00-0.06	0.13-0.16	6.0-8.9	0.5-1.0	.32	.32			
	15-28	14	61	---	1.85-2.00	0.06-0.20	---	---	---	---	---			
	28-80	10	64	---	1.85-2.00	0.06-0.20	---	---	---	---	---			
2381: Kanza-----	0-4	67	25	3-12	1.50-1.70	0.60-2.00	0.08-0.13	3.0-5.9	1.0-3.0	.20	.20	5	3	86
	4-9	80	14	3-12	1.50-1.70	0.60-2.00	0.08-0.13	3.0-5.9	1.0-3.0	.17	.17			
	9-17	82	12	3-12	1.60-1.70	5.95-19.98	0.10-0.12	0.0-2.9	0.5-2.0	.17	.17			
	17-33	80	15	1-12	1.50-1.70	5.95-19.98	0.06-0.11	0.0-2.9	0.0-0.5	.17	.20			
	33-80	90	5	1-12	1.50-1.70	5.95-19.98	0.06-0.11	0.0-2.9	0.0-0.5	.17	.20			
Ninnescah----	0-6	57	27	11-17	1.40-1.50	2.00-6.00	0.14-0.16	0.0-2.9	1.0-4.0	.20	.20	5	3	86
	6-14	62	22	11-17	1.40-1.50	2.00-6.00	0.14-0.16	0.0-2.9	1.0-4.0	.20	.20			
	14-19	66	19	11-17	1.40-1.60	2.00-6.00	0.14-0.16	0.0-2.9	1.0-4.0	.20	.20			
	19-30	73	16	10-17	1.40-1.65	2.00-6.00	0.12-0.16	0.0-2.9	0.5-1.0	.20	.20			
	30-37	72	16	10-17	1.40-1.70	2.00-6.00	0.12-0.16	0.0-2.9	0.5-1.0	.20	.20			
	37-52	71	17	2-12	1.50-1.70	1.98-19.98	0.05-0.12	0.0-2.9	0.0-0.5	.17	.17			
	52-80	75	16	2-10	1.50-1.70	1.98-19.98	0.05-0.12	0.0-2.9	0.0-0.5	.17	.17			
2390: Kaskan-----	0-7	34	44	18-26	1.35-1.45	0.60-2.00	0.20-0.23	0.0-2.9	2.0-4.0	.28	.28	4	6	48
	7-17	25	46	27-35	1.35-1.45	0.60-2.00	0.21-0.23	3.0-5.9	2.0-4.0	.37	.37			
	17-24	52	28	18-26	1.45-1.55	0.60-2.00	0.17-0.19	0.0-2.9	1.0-2.0	.28	.28			
	24-35	63	25	10-17	1.45-1.55	2.00-6.00	0.14-0.17	0.0-2.9	0.0-1.0	.24	.24			
	35-41	79	15	0-8	1.50-1.60	5.95-19.98	0.06-0.09	0.0-2.9	0.0-0.5	.10	.10			
	41-47	93	4	0-8	1.50-1.60	5.95-19.98	0.06-0.09	0.0-2.9	0.0-0.5	.10	.10			
	47-66	94	4	0-8	1.50-1.60	5.95-19.98	0.06-0.09	0.0-2.9	0.0-0.5	.10	.10			
	66-80	97	2	0-2	1.55-1.65	5.95-19.98	0.02-0.05	0.0-2.9	0.0-0.0	.05	.05			
2391: Kaskan-----	0-9	17	52	27-35	1.35-1.45	0.20-0.60	0.21-0.23	3.0-5.9	2.0-4.0	.37	.37	5	7	38
	9-13	14	55	27-35	1.35-1.45	0.20-0.60	0.21-0.23	3.0-5.9	2.0-4.0	.37	.37			
	13-17	60	26	10-17	1.45-1.55	2.00-6.00	0.14-0.18	0.0-2.9	0.0-1.0	.24	.24			
	17-21	62	25	10-17	1.45-1.55	2.00-6.00	0.14-0.18	0.0-2.9	0.0-1.0	.24	.24			
	21-27	65	23	10-17	1.45-1.55	2.00-6.00	0.14-0.18	0.0-2.9	0.0-1.0	.24	.24			
	27-43	84	13	0-5	1.50-1.60	5.95-19.98	0.06-0.09	0.0-2.9	0.0-0.5	.10	.10			
	43-57	82	10	1-15	1.45-1.55	1.98-19.98	0.07-0.11	0.0-2.9	0.0-1.0	.10	.10			
	57-80	83	10	1-15	1.45-1.55	1.98-19.98	0.07-0.11	0.0-2.9	0.0-1.0	.10	.10			
2395: Kisiwa-----	0-4	51	29	18-26	1.30-1.40	0.60-2.00	0.20-0.22	0.0-2.9	1.0-4.0	.43	.43	2	6	48
	4-7	49	30	18-28	1.30-1.50	0.60-2.00	0.20-0.22	0.0-2.9	1.0-4.0	.32	.32			
	7-14	42	27	27-40	1.30-1.60	0.00-0.06	0.15-0.18	3.0-5.9	0.0-1.0	.37	.37			
	14-23	39	24	27-37	1.35-1.60	0.00-0.06	0.15-0.18	3.0-5.9	0.0-1.0	.37	.37			
	23-31	30	29	26-45	1.30-1.60	0.00-0.06	0.08-0.15	3.0-5.9	0.0-1.0	.37	.37			
	31-40	27	29	26-45	1.30-1.60	0.00-0.06	0.08-0.15	3.0-5.9	0.0-1.0	.37	.37			
	40-46	45	28	26-45	1.45-1.60	0.00-0.06	0.08-0.15	3.0-5.9	0.0-0.5	.37	.37			
	46-52	58	29	5-18	1.30-1.70	2.00-6.00	0.11-0.17	0.0-2.9	0.0-0.5	.20	.20			
	52-58	64	27	5-18	1.30-1.70	2.00-6.00	0.11-0.17	0.0-2.9	0.0-0.5	.20	.20			
	58-65	61	30	0-12	1.30-1.70	5.95-19.98	0.05-0.10	0.0-2.9	0.0-0.5	.10	.10			
	65-80	97	3	0-12	1.30-1.40	5.95-19.98	0.05-0.10	0.0-2.9	0.0-0.5	.10	.10			
2509: Ladysmith----	0-8			28-35	1.35-1.45	0.20-0.60	0.21-0.23	3.0-5.9	2.0-4.0	.37	.37	5	7	38
	8-21			40-60	1.35-1.50	0.00-0.06	0.10-0.15	6.0-8.9	1.0-2.0	.37	.37			
	21-31			40-60	1.35-1.50	0.00-0.06	0.10-0.15	6.0-8.9	1.0-2.0	.37	.37			
	31-45			35-55	1.40-1.60	0.00-0.60	0.10-0.19	3.0-5.9	1.0-2.0	.37	.37			
	45-80			35-55	1.40-1.60	0.00-0.60	0.10-0.19	3.0-5.9	1.0-2.0	.37	.37			
2556: Langdon-----	0-8	96	1	0-6	1.35-1.50	6.00-19.99	0.07-0.09	0.0-2.9	0.0-1.0	.15	.15	5	1	220
	8-47			0-12	1.50-1.70	6.00-19.99	0.02-0.08	0.0-2.9	0.0-0.0	.15	.15			
	47-64	96	1	0-5	1.50-1.70	6.00-19.99	0.02-0.08	0.0-2.9	0.0-0.0	.17	.15			
	64-80			0-12	1.50-1.70	6.00-19.99	0.02-0.08	0.0-2.9	0.0-0.0	.15	.15			
2587: Imano-----	0-10	29	38	27-35	1.30-1.40	0.20-0.60	0.17-0.19	3.0-5.9	1.0-3.0	.28	.28	4	4L	86
	10-25	42	32	18-35	1.35-1.45	0.20-0.60	0.16-0.19	3.0-5.9	0.5-1.0	.28	.28			
	25-55	91	4	1-8	1.45-1.55	5.95-19.98	0.02-0.10	0.0-2.9	0.0-0.5	.15	.15			
	55-80	98	1	1-5	1.45-1.55	5.95-19.98	0.02-0.10	0.0-2.9	0.0-0.5	.15	.15			
2588: Longford, Moderately Eroded-----	0-6			27-35	1.30-1.40	0.20-0.60	0.21-0.23	3.0-5.9	1.0-2.0	.37	.37	5	7	38
	6-11			27-35	1.30-1.40	0.20-0.60	0.21-0.23	3.0-5.9	0.5-0.9	.32	.32			
	11-28			35-45	1.35-1.50	0.00-0.60	0.11-0.20	6.0-8.9	0.5-1.0	.43	.43			
	28-43			35-45	1.35-1.50	0.00-0.60	0.11-0.20	6.0-8.9	0.5-1.0	.43	.43			
	43-60			27-35	1.30-1.40	0.20-0.60	0.14-0.20	3.0-5.9	0.0-0.5	.32	.32			
	60-80			27-35	1.30-1.40	0.20-0.60	0.14-0.20	3.0-5.9	0.0-0.5	.32	.32			



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Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
2812: Mahone-----	0-8	75	21	3-11	1.50-1.60	6.00-19.99	0.07-0.11	0.0-2.9	0.0-0.8	.17	.17	5	2	134
	8-14	74	21	3-11	1.50-1.60	5.95-19.98	0.07-0.11	0.0-2.9	0.0-0.8	.17	.17			
	14-20	72	23	5-17	1.45-1.55	2.00-6.00	0.14-0.18	0.0-2.9	0.0-1.0	.24	.24			
	20-25	54	40	5-17	1.45-1.55	2.00-6.00	0.14-0.18	0.0-2.9	0.0-1.0	.24	.24			
	25-33	32	61	7-17	1.45-1.55	2.00-6.00	0.14-0.18	0.0-2.9	0.0-1.0	.24	.24			
	33-39	16	74	8-17	1.45-1.55	2.00-6.00	0.14-0.18	0.0-2.9	0.0-1.0	.24	.24			
	39-42	26	40	18-34	1.30-1.50	0.60-2.00	0.18-0.22	0.0-2.9	1.0-2.0	.32	.32			
	42-48	63	28	8-34	1.30-1.50	0.60-2.00	0.18-0.22	0.0-2.9	1.0-2.0	.32	.32			
	48-54	59	28	12-28	1.45-1.55	2.00-6.00	0.14-0.19	0.0-2.9	0.0-0.5	.24	.24			
	54-61	53	35	12-28	1.45-1.55	2.00-6.00	0.14-0.19	0.0-2.9	0.0-0.5	.24	.24			
	61-66	66	23	10-28	1.45-1.55	2.00-6.00	0.14-0.19	0.0-2.9	0.0-0.5	.24	.24			
	66-71	68	21	10-28	1.45-1.55	2.00-6.00	0.14-0.19	0.0-2.9	0.0-0.5	.24	.24			
	71-78	76	16	0-10	1.55-1.65	5.95-19.98	0.02-0.07	0.0-2.9	0.0-0.0	.05	.05			
	78-80	91	6	0-4	1.55-1.65	5.95-19.98	0.02-0.07	0.0-2.9	0.0-0.0	.05	.05			
2948: Nalim-----	0-6	49	36	14-27	1.45-1.65	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	5	56
	6-9	38	37	14-27	1.35-1.65	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28			
	9-13	33	32	25-35	1.40-1.65	0.20-0.60	0.14-0.21	3.0-5.9	0.5-1.5	.28	.28			
	13-21	38	30	25-35	1.40-1.80	0.20-0.60	0.14-0.21	3.0-5.9	0.5-1.2	.28	.28			
	21-31	45	30	25-35	1.40-1.85	0.20-0.60	0.14-0.21	3.0-5.9	0.5-1.0	.28	.28			
	31-39	54	23	10-35	1.40-1.70	0.20-0.60	0.10-0.20	3.0-5.9	0.2-0.8	.32	.28			
	39-44	70	12	10-35	1.40-1.70	0.20-0.60	0.10-0.20	3.0-5.9	0.2-0.5	.32	.28			
	44-52	74	10	5-35	1.45-1.70	0.20-0.60	0.06-0.20	3.0-5.9	0.1-0.5	.32	.32			
	52-62	82	8	4-15	1.45-1.60	2.00-6.00	0.09-0.12	0.0-2.9	0.1-0.5	.17	.20			
	62-72	78	9	2-15	1.50-1.65	5.95-19.98	0.03-0.10	0.0-2.9	0.0-0.2	.15	.32			
	72-80	93	2	2-10	1.50-1.65	5.95-19.98	0.03-0.10	0.0-2.9	0.0-0.2	.15	.32			
2949: Naron, Moderately Eroded-----	0-8	73	17	8-15	1.45-1.55	2.00-6.00	0.14-0.18	0.0-2.9	0.0-1.0	.20	.20	5	3	86
	8-28	66	15	18-27	1.45-1.55	0.60-2.00	0.15-0.18	0.0-2.9	0.0-0.5	.32	.32			
	28-39	65	15	18-27	1.45-1.55	0.60-2.00	0.15-0.18	0.0-2.9	0.0-0.5	.32	.32			
	39-55	67	14	18-27	1.45-1.55	0.60-2.00	0.15-0.18	0.0-2.9	0.0-0.5	.32	.32			
	55-66	69	13	2-18	1.55-1.60	2.00-6.00	0.10-0.15	0.0-2.9	0.0-0.5	.17	.17			
	66-80	72	13	2-18	1.55-1.60	5.95-19.98	0.10-0.15	0.0-2.9	0.0-0.5	.10	.10			
2950: Naron, Moderately Eroded-----	0-8	73	17	8-15	1.45-1.55	2.00-6.00	0.14-0.18	0.0-2.9	0.0-1.0	.20	.20	5	3	86
	8-28	66	15	18-27	1.45-1.55	0.60-2.00	0.15-0.18	0.0-2.9	0.0-0.5	.32	.32			
	28-39	65	15	18-27	1.45-1.55	0.60-2.00	0.15-0.18	0.0-2.9	0.0-0.5	.32	.32			
	39-55	67	14	18-27	1.45-1.55	0.60-2.00	0.15-0.18	0.0-2.9	0.0-0.5	.32	.32			
	55-66	69	13	2-18	1.55-1.60	2.00-6.00	0.10-0.15	0.0-2.9	0.0-0.5	.17	.17			
	66-80	72	13	2-18	1.55-1.60	5.95-19.98	0.10-0.15	0.0-2.9	0.0-0.5	.10	.10			
2951: Nash-----	0-8	26	58	10-18	1.35-1.55	0.60-2.00	0.15-0.24	0.0-2.9	1.0-3.0	.37	.37	3	5	56
	8-19	30	54	10-18	1.40-1.65	0.60-2.00	0.13-0.24	0.0-2.9	0.5-1.0	.37	.37			
	19-28	28	54	10-18	1.40-2.00	0.60-2.00	0.13-0.24	0.0-2.9	0.5-1.0	.37	.37			
	28-80	5	77	---	---	---	---	---	---	---	---			
2952: Nash-----	0-8	26	58	10-18	1.35-1.55	0.60-2.00	0.15-0.24	0.0-2.9	1.0-3.0	.37	.37	3	5	56
	8-19	30	54	10-18	1.40-1.65	0.60-2.00	0.13-0.24	0.0-2.9	0.5-1.0	.37	.37			
	19-28	28	54	10-18	1.40-2.00	0.60-2.00	0.13-0.24	0.0-2.9	0.5-1.0	.37	.37			
	28-80	5	77	---	---	---	---	---	---	---	---			
Lucien-----	0-6	34	54	10-27	1.30-1.55	0.60-2.00	0.13-0.24	0.0-2.9	0.0-2.0	.37	.37	2	4L	86
	6-12	42	44	12-27	1.30-1.55	0.60-2.00	0.13-0.24	0.0-2.9	0.0-1.0	.37	.37			
	12-80	53	37	---	---	---	---	---	---	---	---			
2953: Nash, Moderately Eroded-----	0-8	26	58	10-18	1.35-1.55	0.60-2.00	0.15-0.24	0.0-2.9	0.5-1.5	.37	.37	3	5	56
	8-19	30	54	10-18	1.40-1.65	0.60-2.00	0.13-0.24	0.0-2.9	0.5-1.0	.37	.37			
	19-28	28	54	10-18	1.40-2.00	0.60-2.00	0.13-0.24	0.0-2.9	0.5-1.0	.37	.37			
	28-80	5	77	---	---	---	---	---	---	---	---			
Lucien-----	0-6	34	54	10-27	1.30-1.55	0.60-2.00	0.13-0.24	0.0-2.9	0.0-2.0	.37	.37	2	4L	86
	6-12	42	44	12-27	1.30-1.55	0.60-2.00	0.13-0.24	0.0-2.9	0.0-1.0	.37	.37			
	12-80	53	37	---	---	---	---	---	---	---	---			
2955: Nickerson----	0-6	81	7	9-15	1.45-1.60	6.00-19.99	0.20-0.22	0.0-2.9	0.0-0.8	.17	.17	4	3	86
	6-12	85	9	5-26	1.40-1.80	0.60-2.00	0.15-0.18	0.0-2.9	0.0-0.6	.24	.24			
	12-18	78	10	10-21	1.40-1.70	2.00-6.00	0.15-0.19	0.0-2.9	0.0-0.6	.17	.17			
	18-29	59	20	0-25	1.40-1.60	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.6	.10	.10			
	29-34	52	32	0-20	1.40-1.60	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.5	.10	.10			
	34-38	53	35	0-15	1.40-1.60	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.4	.10	.10			
	38-45	82	12	0-10	1.40-1.60	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.2	.10	.10			
	45-53	91	9	0-10	1.40-1.70	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.1	.10	.10			
	53-57	93	7	0-10	1.40-1.50	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.1	.10	.10			
	57-80	88	11	0-10	1.40-1.50	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.1	.10	.10			



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Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
2956: Nickerson----	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
	0-6	89	7	2-10	1.45-1.60	6.00-19.99	0.16-0.18	0.0-2.9	0.0-0.8	.15	.15	4	2	134
	6-12	85	9	5-26	1.40-1.80	0.60-2.00	0.15-0.18	0.0-2.9	0.0-0.6	.24	.24			
	12-18	78	10	10-21	1.40-1.70	2.00-6.00	0.15-0.19	0.0-2.9	0.0-0.6	.17	.17			
	18-29	59	20	0-25	1.40-1.60	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.6	.10	.10			
	29-34	52	32	0-20	1.40-1.60	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.5	.10	.10			
	34-38	53	35	0-15	1.40-1.60	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.4	.10	.10			
	38-45	82	12	0-10	1.40-1.60	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.2	.10	.10			
	45-53	91	9	0-10	1.40-1.70	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.1	.10	.10			
	53-57	93	7	0-10	1.40-1.50	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.1	.10	.10			
	57-80	88	11	0-10	1.40-1.50	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.1	.10	.10			
2957: Nickerson----	0-6	81	7	9-15	1.45-1.60	6.00-19.99	0.20-0.22	0.0-2.9	0.0-0.8	.17	.17	4	3	86
	6-12	85	9	5-26	1.40-1.80	0.60-2.00	0.15-0.18	0.0-2.9	0.0-0.6	.24	.24			
	12-18	78	10	10-21	1.40-1.70	2.00-6.00	0.15-0.19	0.0-2.9	0.0-0.6	.17	.17			
	18-29	59	20	0-28	1.40-1.60	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.6	.10	.10			
	29-34	52	32	0-20	1.40-1.60	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.5	.10	.10			
	34-38	53	35	0-15	1.40-1.60	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.4	.10	.10			
	38-45	82	12	0-10	1.40-1.60	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.2	.10	.10			
	45-53	91	9	0-10	1.40-1.70	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.1	.10	.10			
	53-57	93	7	0-10	1.40-1.50	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.1	.10	.10			
	57-80	88	11	0-10	1.40-1.50	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.1	.10	.10			
Punkin-----	0-6	68	24	7-15	1.45-1.55	2.00-6.00	0.14-0.18	0.0-2.9	1.0-3.0	.32	.32	2	3	86
	6-14	64	25	7-15	1.45-1.55	2.00-6.00	0.14-0.18	0.0-2.9	1.0-3.0	.20	.20			
	14-22	41	24	34-60	1.30-1.45	0.00-0.06	0.09-0.13	6.0-8.9	1.0-3.0	.32	.28			
	22-32	32	25	34-60	1.30-1.45	0.00-0.06	0.09-0.13	6.0-8.9	1.0-3.0	.32	.28			
	32-41	49	24	20-27	1.30-1.40	0.06-0.20	0.16-0.18	3.0-5.9	1.0-2.0	.24	.24			
	41-51	43	37	20-27	1.30-1.40	0.06-0.20	0.16-0.18	3.0-5.9	1.0-2.0	.24	.24			
	51-63	95	2	0-5	1.30-1.45	5.95-19.98	0.05-0.07	0.0-2.9	0.0-0.0	.05	.05			
	63-80	97	1	0-5	1.30-1.45	5.95-19.98	0.02-0.05	0.0-2.9	0.0-0.0	.02	.02			
2958: Ninnescah----	0-6	57	27	11-17	1.40-1.50	2.00-6.00	0.14-0.16	0.0-2.9	1.0-4.0	.20	.20	5	3	86
	6-14	62	22	11-17	1.40-1.50	2.00-6.00	0.14-0.16	0.0-2.9	1.0-4.0	.20	.20			
	14-19	66	19	11-17	1.40-1.60	2.00-6.00	0.14-0.16	0.0-2.9	1.0-4.0	.20	.20			
	19-30	73	16	10-17	1.40-1.65	2.00-6.00	0.12-0.16	0.0-2.9	0.5-1.0	.20	.20			
	30-37	72	16	10-17	1.40-1.70	2.00-6.00	0.12-0.16	0.0-2.9	0.5-1.0	.20	.20			
	37-52	71	17	2-12	1.50-1.70	1.98-19.98	0.05-0.12	0.0-2.9	0.0-0.5	.17	.17			
	52-80	75	16	2-10	1.50-1.70	1.98-19.98	0.05-0.12	0.0-2.9	0.0-0.5	.17	.17			
2959: Ninnescah, saline-----	0-6	66	20	11-17	1.40-1.50	2.00-6.00	0.12-0.14	0.0-2.9	1.0-4.0	.28	.28	5	3	86
	6-14	63	22	11-17	1.40-1.50	2.00-6.00	0.12-0.14	0.0-2.9	1.0-4.0	.20	.20			
	14-19	65	19	11-17	1.40-1.50	2.00-6.00	0.12-0.14	0.0-2.9	1.0-4.0	.20	.20			
	19-30	70	17	10-17	1.40-1.50	2.00-6.00	0.10-0.14	0.0-2.9	0.5-1.0	.20	.20			
	30-37	75	15	10-17	1.40-1.50	2.00-6.00	0.10-0.14	0.0-2.9	0.5-1.0	.20	.20			
	37-52	84	10	2-10	1.50-1.60	1.98-19.98	0.05-0.10	0.0-2.9	0.0-0.5	.17	.17			
	52-80	82	14	2-10	1.50-1.60	1.98-19.98	0.05-0.10	0.0-2.9	0.0-0.5	.17	.17			
3051: Ost-----	0-8	35	44	10-27	1.40-1.54	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	8-12	32	41	20-35	1.35-1.45	0.20-0.60	0.15-0.19	3.0-5.9	1.0-2.0	.32	.32			
	12-18	32	41	20-35	1.35-1.45	0.20-0.60	0.15-0.19	3.0-5.9	1.0-2.0	.32	.32			
	18-23	23	48	18-35	1.40-1.52	0.20-0.60	0.15-0.19	3.0-5.9	0.5-1.0	.32	.32			
	23-38	26	47	5-30	1.40-1.65	0.20-0.60	0.13-0.19	0.0-2.9	0.0-0.6	.32	.37			
	38-54	33	44	5-30	1.40-1.65	0.20-0.60	0.13-0.19	0.0-2.9	0.0-0.5	.32	.37			
	54-80	44	35	5-30	1.40-1.65	0.20-0.60	0.13-0.19	0.0-2.9	0.0-0.5	.32	.37			
3052: Ost-----	0-8	35	44	10-27	1.40-1.54	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	8-12	32	41	20-35	1.35-1.45	0.20-0.60	0.15-0.19	3.0-5.9	1.0-2.0	.32	.32			
	12-18	32	41	20-35	1.35-1.45	0.20-0.60	0.15-0.19	3.0-5.9	1.0-2.0	.32	.32			
	18-23	23	48	18-35	1.40-1.52	0.20-0.60	0.15-0.19	3.0-5.9	0.5-1.0	.32	.32			
	23-38	26	47	5-30	1.40-1.65	0.20-0.60	0.13-0.19	0.0-2.9	0.0-0.6	.32	.37			
	38-54	33	44	5-30	1.40-1.65	0.20-0.60	0.13-0.19	0.0-2.9	0.0-0.5	.32	.37			
	54-80	44	35	5-30	1.40-1.65	0.20-0.60	0.13-0.19	0.0-2.9	0.0-0.5	.32	.37			
Clark-----	0-11	37	41	15-27	1.35-1.45	0.60-2.00	0.17-0.22	3.0-5.9	1.0-2.0	.28	.28	5	4L	86
	11-16	33	40	18-35	1.35-1.70	0.60-2.00	0.17-0.19	3.0-5.9	0.5-2.0	.32	.32			
	16-28	29	50	18-35	1.35-1.70	0.60-2.00	0.14-0.19	3.0-5.9	0.5-1.0	.32	.32			
	28-45	45	38	10-25	1.35-1.70	0.60-2.00	0.14-0.19	3.0-5.9	0.5-1.0	.32	.32			
	45-65	47	44	7-20	1.35-1.70	0.60-2.00	0.14-0.19	3.0-5.9	0.0-1.0	.32	.32			
	65-80	26	65	7-20	1.35-1.70	0.60-2.00	0.14-0.19	3.0-5.9	0.0-1.0	.32	.32			
3170: Penalosa-----	0-5	22	57	15-28	1.30-1.50	0.60-2.00	0.16-0.24	0.0-2.9	1.0-3.0	.37	.37	5	6	48
	5-10	21	57	15-28	1.30-1.50	0.60-2.00	0.16-0.24	0.0-2.9	1.0-3.0	.43	.43			
	10-14	19	41	27-40	1.36-1.70	0.20-0.60	0.16-0.22	3.0-5.9	1.0-3.0	.37	.37			
	14-22	19	44	27-45	1.40-1.70	0.20-0.60	0.16-0.22	3.0-5.9	1.0-3.0	.37	.37			
	22-28	18	46	35-50	1.40-1.70	0.06-0.20	0.12-0.22	6.0-8.9	0.5-2.0	.37	.37			
	28-34	19	45	35-50	1.40-1.70	0.06-0.20	0.12-0.22	6.0-8.9	0.5-2.0	.37	.37			
	34-39	18	50	30-50	1.40-1.70	0.06-0.20	0.12-0.22	6.0-8.9	0.5-2.0	.37	.37			
	39-48	17	57	15-27	1.30-1.50	0.60-2.00	0.16-0.24	0.0-2.9	0.0-1.0	.43	.43			
	48-61	18	44	35-50	1.40-1.70	0.06-0.20	0.12-0.22	6.0-8.9	0.2-2.0	.37	.37			
	61-71	19	44	35-50	1.40-1.70	0.06-0.20	0.12-0.22	6.0-8.9	0.2-2.0	.37	.37			
	71-80	24	46	30-50	1.40-1.70	0.06-0.20	0.12-0.22	6.0-8.9	0.0-2.0	.37	.37			



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(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
3171: Penalosa-----	0-5	22	57	15-28	1.30-1.50	0.60-2.00	0.16-0.24	0.0-2.9	1.0-3.0	.37	.37	5	6	48
	5-10	21	57	15-26	1.30-1.50	0.60-2.00	0.16-0.24	0.0-2.9	1.0-3.0	.43	.43			
	10-14	19	41	27-40	1.36-1.70	0.20-0.60	0.16-0.22	3.0-5.9	1.0-3.0	.37	.37			
	14-22	19	44	27-37	1.40-1.70	0.20-0.60	0.16-0.22	3.0-5.9	1.0-3.0	.37	.37			
	22-28	18	46	35-50	1.40-1.70	0.06-0.20	0.12-0.22	6.0-8.9	0.5-2.0	.37	.37			
	28-34	19	45	35-50	1.40-1.70	0.06-0.20	0.12-0.22	6.0-8.9	0.5-2.0	.37	.37			
	34-39	18	50	30-50	1.40-1.70	0.06-0.20	0.12-0.22	6.0-8.9	0.5-2.0	.37	.37			
	39-48	17	57	15-27	1.30-1.50	0.60-2.00	0.16-0.24	0.0-2.9	0.0-1.0	.43	.43			
	48-61	18	44	35-50	1.40-1.70	0.06-0.20	0.12-0.22	6.0-8.9	0.2-2.0	.37	.37			
	61-71	19	44	35-50	1.40-1.70	0.06-0.20	0.12-0.22	6.0-8.9	0.2-2.0	.37	.37			
	71-80	24	46	30-50	1.40-1.70	0.06-0.20	0.12-0.22	6.0-8.9	0.0-2.0	.37	.37			
3180: Pratt-----	0-8	90	4	1-7	1.40-1.55	6.00-19.99	0.07-0.09	0.0-2.9	0.5-1.0	.15	.15	5	1	220
	8-24	87	3	4-11	1.45-1.55	5.95-19.98	0.09-0.12	0.0-2.9	0.0-0.5	.17	.17			
	24-64	89	3	4-11	1.45-1.55	5.95-19.98	0.09-0.12	0.0-2.9	0.0-0.5	.17	.17			
	64-80	89	4	1-8	1.45-1.60	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.5	.17	.17			
3181: Pratt-----	0-8	90	4	1-7	1.40-1.55	6.00-19.99	0.07-0.09	0.0-2.9	0.5-1.0	.15	.15	5	1	220
	8-24	87	3	4-11	1.45-1.55	5.95-19.98	0.09-0.12	0.0-2.9	0.0-0.5	.17	.17			
	24-64	89	3	4-11	1.45-1.55	5.95-19.98	0.09-0.12	0.0-2.9	0.0-0.5	.17	.17			
	64-80	89	4	1-8	1.45-1.60	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.5	.17	.17			
Turon-----	0-8	88	8	1-5	1.40-1.55	6.00-19.99	0.02-0.10	0.0-2.9	0.0-1.0	.15	.15	5	1	220
	8-28	88	4	3-10	1.40-1.55	5.95-19.98	0.09-0.12	0.0-2.9	0.5-1.0	.17	.17			
	28-40	88	3	2-18	1.40-1.55	1.98-19.98	0.10-0.15	0.0-2.9	0.0-0.0	.24	.24			
	40-58	11	49	27-41	1.45-1.60	0.00-0.60	0.12-0.18	3.0-5.9	0.0-0.5	.32	.32			
	58-75	6	53	27-45	1.45-1.60	0.00-0.60	0.12-0.18	3.0-5.9	0.0-0.5	.32	.32			
	75-80	4	54	27-45	1.45-1.60	0.00-0.60	0.12-0.18	3.0-5.9	0.0-0.5	.32	.32			
3190: Punkin-----	0-4	26	59	15-27	1.30-1.55	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.43	.43	2	5	56
	4-8	14	42	35-50	1.30-1.55	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28			
	8-15	13	46	35-60	1.30-1.45	0.60-2.00	0.09-0.13	0.0-2.9	1.0-3.0	.28	.28			
	15-21	10	45	35-60	1.30-1.45	0.00-0.06	0.09-0.13	6.0-8.9	1.0-3.0	.28	.28			
	21-39	8	49	35-60	1.30-1.45	0.00-0.06	0.09-0.13	6.0-8.9	1.0-2.0	.32	.32			
	39-47	5	51	35-60	1.30-1.45	0.00-0.06	0.09-0.13	6.0-8.9	1.0-2.0	.32	.32			
	47-64	4	56	35-60	1.30-1.45	0.00-0.06	0.09-0.13	6.0-8.9	1.0-2.0	.32	.32			
	64-78	22	46	25-40	1.30-1.60	0.00-0.06	0.10-0.16	6.0-8.9	0.5-1.0	.32	.32			
	78-80	54	14	25-40	1.30-1.60	0.00-0.06	0.10-0.16	6.0-8.9	0.5-1.0	.32	.32			
3191: Punkin-----	0-4	26	59	15-27	1.30-1.55	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.43	.43	2	5	56
	4-8	14	42	35-50	1.30-1.55	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28			
	8-15	13	46	35-60	1.30-1.45	0.60-2.00	0.09-0.13	0.0-2.9	1.0-3.0	.28	.28			
	15-21	10	45	35-60	1.30-1.45	0.00-0.06	0.09-0.13	6.0-8.9	1.0-3.0	.28	.28			
	21-39	8	49	35-60	1.30-1.45	0.00-0.06	0.09-0.13	6.0-8.9	1.0-2.0	.32	.32			
	39-47	5	51	35-60	1.30-1.45	0.00-0.06	0.09-0.13	6.0-8.9	1.0-2.0	.32	.32			
	47-64	4	56	35-60	1.30-1.45	0.00-0.06	0.09-0.13	6.0-8.9	1.0-2.0	.32	.32			
	64-78	22	46	25-40	1.30-1.60	0.00-0.06	0.10-0.16	6.0-8.9	0.5-1.0	.32	.32			
	78-80	54	14	25-40	1.30-1.60	0.00-0.06	0.10-0.16	6.0-8.9	0.5-1.0	.32	.32			
Taver-----	0-7	36	44	17-25	1.30-1.55	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	7-17	15	49	35-45	1.35-1.60	0.00-0.06	0.12-0.18	6.0-8.9	0.0-2.0	.37	.37			
	17-33	5	55	35-45	1.35-1.60	0.00-0.06	0.12-0.18	6.0-8.9	0.0-2.0	.37	.37			
	33-53	5	56	35-45	1.35-1.60	0.00-0.06	0.12-0.18	6.0-8.9	0.0-2.0	.37	.37			
	53-64	30	35	20-35	1.45-1.65	0.20-0.60	0.15-0.19	0.0-2.9	0.5-1.0	.28	.28			
	64-80	50	22	20-30	1.45-1.65	0.60-2.00	0.15-0.19	0.0-2.9	0.5-1.0	.28	.28			
3403: Sand Pit-----	---			---	---	---	---	---	---	---	---	-	---	---
3469: Smolan-----	0-5	20	49	27-35	1.30-1.40	0.20-0.60	0.21-0.23	3.0-5.9	2.0-4.0	.37	.37	5	7	38
	5-8	20	54	18-35	1.30-1.40	0.20-0.60	0.21-0.24	3.0-5.9	1.0-2.0	.37	.37			
	8-15	24	50	18-35	1.30-1.40	0.20-0.60	0.21-0.24	3.0-5.9	1.0-2.0	.37	.37			
	15-29	7	51	35-50	1.30-1.45	0.06-0.20	0.12-0.18	6.0-8.9	0.0-1.0	.37	.37			
	29-38	7	51	35-50	1.30-1.45	0.06-0.20	0.12-0.18	6.0-8.9	0.0-1.0	.37	.37			
	38-49	7	51	35-50	1.30-1.45	0.06-0.20	0.12-0.18	6.0-8.9	0.0-1.0	.37	.37			
	49-80	20	49	27-35	1.30-1.40	0.20-0.60	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			



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Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
3510: Saltcreek----	0-5	67	20	10-19	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	1.0-2.0	.20	.20	5	3	86
	5-10	58	20	10-27	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	1.0-2.0	.20	.20			
	10-26	58	21	16-28	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.0-1.0	.28	.28			
	26-39	63	18	16-28	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.0-1.0	.28	.28			
	39-56	17	42	28-42	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	56-66	8	56	28-42	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	66-80	10	59	28-42	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
Funmar-----	0-6	44	36	14-26	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	56
	6-12	44	34	14-26	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28			
	12-17	46	29	22-34	1.40-1.60	0.20-0.60	0.17-0.19	0.0-2.9	1.0-2.0	.32	.32			
	17-26	40	31	22-34	1.40-1.60	0.20-0.60	0.17-0.19	0.0-2.9	1.0-2.0	.32	.32			
	26-32	25	49	22-34	1.40-1.60	0.20-0.60	0.17-0.19	0.0-2.9	0.5-2.0	.32	.32			
	32-38	16	52	26-34	1.35-1.45	0.20-0.60	0.20-0.22	0.0-2.9	1.0-3.0	.32	.32			
	38-54	14	48	28-45	1.40-1.60	0.06-0.20	0.10-0.17	3.0-5.9	0.0-0.5	.37	.37			
	54-66	18	46	28-45	1.40-1.60	0.06-0.20	0.10-0.17	3.0-5.9	0.0-0.5	.37	.37			
	66-80	14	48	26-45	1.50-1.60	0.06-0.20	0.10-0.17	0.0-2.9	0.0-0.5	.37	.37			
Farnum-----	0-5	42	41	14-27	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	56
	5-15	41	39	14-27	1.35-1.45	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28			
	15-21	46	31	20-27	1.40-1.50	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.5	.28	.28			
	21-34	48	27	20-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	0.0-0.5	.28	.28			
	34-48	44	30	25-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	0.0-0.5	.28	.28			
	48-61	33	39	25-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	0.0-0.5	.28	.28			
	61-73	33	40	25-35	1.40-1.50	0.60-2.00	0.15-0.19	3.0-5.9	0.0-0.5	.28	.28			
	73-80	38	38	12-29	1.40-1.55	0.60-2.00	0.13-0.16	0.0-2.9	0.0-0.5	.28	.28			
3511: Saltcreek----	0-5	67	20	10-19	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	1.0-2.0	.20	.20	5	3	86
	5-10	58	20	10-27	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	1.0-2.0	.20	.20			
	10-26	58	21	16-28	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.0-1.0	.28	.28			
	26-39	63	18	16-28	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.0-1.0	.28	.28			
	39-56	17	42	28-42	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	56-66	8	56	28-42	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	66-80	10	59	28-42	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
Naron, sandy substratum--	0-7	74	16	8-15	1.45-1.55	2.00-6.00	0.14-0.18	0.0-2.9	1.0-3.0	.20	.20	5	3	86
	7-19	70	18	8-15	1.45-1.55	2.00-6.00	0.14-0.18	0.0-2.9	1.0-3.0	.20	.20			
	19-34	45	35	18-28	1.45-1.55	2.00-6.00	0.15-0.18	0.0-2.9	0.0-0.5	.32	.32			
	34-41	65	15	18-28	1.45-1.55	0.60-2.00	0.15-0.18	0.0-2.9	0.0-0.5	.32	.32			
	41-61	70	20	2-15	1.55-1.60	2.00-6.00	0.10-0.15	0.0-2.9	0.0-0.0	.15	.15			
	61-80	90	6	0-5	1.55-1.60	5.95-19.98	0.05-0.07	0.0-2.9	0.0-0.0	.05	.05			
3512: Saltcreek----	0-5	67	20	10-19	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	1.0-2.0	.20	.20	5	3	86
	5-10	60	18	10-27	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	1.0-2.0	.20	.20			
	10-26	60	18	16-28	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.0-1.0	.28	.28			
	26-39	62	19	16-28	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.0-1.0	.28	.28			
	39-56	8	51	28-42	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	56-66	8	55	28-42	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	66-80	20	48	28-42	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
Naron-----	0-8	64	27	8-15	1.45-1.55	2.00-6.00	0.14-0.18	0.0-2.9	1.0-3.0	.20	.20	5	3	86
	8-14	65	20	8-15	1.45-1.55	2.00-6.00	0.14-0.18	0.0-2.9	1.0-3.0	.20	.20			
	14-28	62	19	18-27	1.45-1.55	0.60-2.00	0.15-0.18	0.0-2.9	0.0-0.5	.32	.32			
	28-39	61	18	18-27	1.45-1.55	0.60-2.00	0.15-0.18	0.0-2.9	0.0-0.5	.32	.32			
	39-55	62	19	18-27	1.45-1.55	0.60-2.00	0.15-0.18	0.0-2.9	0.0-0.5	.32	.32			
	55-66	63	19	2-18	1.55-1.60	2.00-6.00	0.10-0.15	0.0-2.9	0.0-0.5	.17	.17			
	66-80	86		2-18	1.55-1.60	5.95-19.98	0.10-0.15	0.0-2.9	0.0-0.5	.10	.10			
3520: Saxman-----	0-4	79	15	1-7	1.50-1.60	5.95-19.98	0.10-0.12	0.0-2.9	0.0-1.3	.20	.20	5	2	134
	4-8	80	15	1-7	1.50-1.70	5.95-19.98	0.10-0.12	0.0-2.9	0.0-1.0	.20	.20			
	8-13	78	14	1-8	1.50-1.70	6.00-19.99	0.10-0.12	0.0-2.9	0.0-1.0	.17	.17			
	13-22	81	12	0-7	1.50-1.60	5.95-19.98	0.06-0.11	0.0-2.9	0.0-0.6	.17	.17			
	22-30	90	6	0-7	1.50-1.75	5.95-19.98	0.06-0.11	0.0-2.9	0.0-0.5	.17	.17			
	30-37	96	4	0-3	1.55-1.65	5.95-19.98	0.02-0.07	0.0-2.9	0.0-0.1	.15	.15			
	37-48	96	4	0-3	1.55-1.65	5.95-19.98	0.02-0.07	0.0-2.9	0.0-0.1	.15	.15			
	48-54	97	3	0-3	1.55-1.65	5.95-19.98	0.02-0.07	0.0-2.9	0.0-0.1	.15	.15			
	54-80	97	3	0-1	1.55-1.65	5.95-19.98	0.02-0.05	0.0-2.9	0.0-0.1	.05	.05			
3530: Shellabarger, Eroded-----	0-5	64	27	8-12	1.35-1.50	2.00-6.00	0.13-0.21	0.0-2.9	0.5-1.0	.20	.20	5	3	86
	5-11	59	24	17-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.9	.28	.32			
	11-19	64	13	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.28	.32			
	19-33	69	8	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.28	.32			
	33-47	80	4	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	47-59	86	3	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	59-73	89	2	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	73-80	90	3	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
Albion-----	0-9	72	18	7-15	1.35-1.45	2.00-6.00	0.16-0.18	0.0-2.9	1.0-2.0	.20	.24	4	3	86
	9-16	80	7	10-18	1.45-1.55	2.00-6.00	0.12-0.18	0.0-2.9	1.0-2.0	.20	.24			
	16-27	84	5	10-18	1.45-1.55	2.00-6.00	0.12-0.18	0.0-2.9	1.0-2.0	.20	.24			
	27-48	87	6	4-15	1.45-1.60	2.00-6.00	0.09-0.12	0.0-2.9	0.0-0.5	.17	.20			
	48-80	90	7	2-10	1.50-1.65	5.95-19.98	0.03-0.10	0.0-2.9	0.0-0.0	.15	.32			



PHYSICAL PROPERTIES OF THE SOILS--Continued  
Reno County, Kansas: Published

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
3531: Shellabarger, Moderately Eroded-----	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
	0-6	64	27	8-12	1.35-1.50	2.00-6.00	0.13-0.21	0.0-2.9	0.2-1.0	.20	.20	5	3	86
	6-11	59	24	17-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-1.2	.28	.32			
	11-19	64	13	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.28	.32			
	19-33	69	8	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.28	.32			
	33-47	80	4	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	47-59	86	3	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	59-73	89	2	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	73-80	90	3	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
Nalim-----	0-6	49	36	14-27	1.45-1.65	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	5	86
	6-9	38	37	14-27	1.35-1.65	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28			
	9-13	33	32	25-35	1.40-1.65	0.20-0.60	0.14-0.21	3.0-5.9	0.5-1.5	.28	.28			
	13-21	38	30	25-35	1.40-1.80	0.20-0.60	0.14-0.21	3.0-5.9	0.5-1.2	.28	.28			
	21-31	45	30	25-35	1.40-1.85	0.20-0.60	0.14-0.21	3.0-5.9	0.5-1.0	.28	.28			
	31-39	54	23	10-35	1.40-1.70	0.20-0.60	0.10-0.20	3.0-5.9	0.2-0.8	.32	.28			
	39-44	70	12	10-35	1.40-1.70	0.20-0.60	0.10-0.20	3.0-5.9	0.2-0.5	.32	.28			
	44-52	74	10	5-35	1.45-1.70	0.20-0.60	0.06-0.20	3.0-5.9	0.1-0.5	.32	.32			
	52-62	82	8	4-15	1.45-1.60	2.00-6.00	0.09-0.12	0.0-2.9	0.1-0.5	.17	.20			
	62-72	78	9	2-15	1.50-1.65	5.95-19.98	0.03-0.10	0.0-2.9	0.0-0.2	.15	.32			
	72-80	93	2	2-10	1.50-1.65	5.95-19.98	0.03-0.10	0.0-2.9	0.0-0.2	.15	.32			
3532: Shellabarger-	0-6	84	9	4-10	1.40-1.55	2.00-6.00	0.10-0.13	0.0-2.9	0.5-2.0	.17	.17	5	2	134
	6-11	59	24	17-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-1.2	.28	.32			
	11-19	64	13	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.28	.32			
	19-33	69	8	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.28	.32			
	33-47	80	4	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	47-59	86	3	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	59-73	89	2	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	73-80	90	3	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
3533: Shellabarger-	0-7	64	27	8-12	1.35-1.50	2.00-6.00	0.13-0.21	0.0-2.9	1.0-2.0	.20	.20	5	3	86
	7-11	59	24	17-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-1.2	.28	.32			
	11-19	64	13	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.28	.32			
	19-33	69	8	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.28	.32			
	33-47	80	4	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	47-59	86	3	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	59-73	89	2	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	73-80	90	3	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
3534: Shellabarger-	0-7	64	27	8-12	1.35-1.50	2.00-6.00	0.13-0.21	0.0-2.9	1.0-2.0	.20	.20	5	3	86
	7-11	59	24	17-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-1.2	.28	.32			
	11-19	64	13	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.28	.32			
	19-33	69	8	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.28	.32			
	33-47	80	4	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	47-59	86	3	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	59-73	89	2	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	73-80	90	3	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
3535: Shellabarger-	0-7	64	27	8-12	1.35-1.50	2.00-6.00	0.13-0.21	0.0-2.9	1.0-2.0	.20	.20	5	3	86
	7-11	59	24	17-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-1.2	.28	.32			
	11-19	64	13	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.28	.32			
	19-33	69	8	18-27	1.45-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.28	.32			
	33-47	80	4	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	47-59	86	3	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	59-73	89	2	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
	73-80	90	3	3-18	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.0	.28	.32			
Nalim-----	0-6	49	36	14-27	1.45-1.65	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	5	86
	6-9	38	37	14-27	1.35-1.65	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28			
	9-13	33	32	25-35	1.40-1.65	0.20-0.60	0.14-0.21	3.0-5.9	0.5-1.5	.28	.28			
	13-21	38	30	25-35	1.40-1.80	0.20-0.60	0.14-0.21	3.0-5.9	0.5-1.2	.28	.28			
	21-31	45	30	25-35	1.40-1.85	0.20-0.60	0.14-0.21	3.0-5.9	0.5-1.0	.28	.28			
	31-39	54	23	10-35	1.40-1.70	0.20-0.60	0.10-0.20	3.0-5.9	0.2-0.8	.32	.28			
	39-44	70	12	10-35	1.40-1.70	0.20-0.60	0.10-0.20	3.0-5.9	0.2-0.5	.32	.28			
	44-52	74	10	5-35	1.45-1.70	0.20-0.60	0.06-0.20	3.0-5.9	0.1-0.5	.32	.32			
	52-62	82	8	4-15	1.45-1.60	2.00-6.00	0.09-0.12	0.0-2.9	0.1-0.5	.17	.20			
	62-72	78	9	2-15	1.50-1.65	5.95-19.98	0.03-0.10	0.0-2.9	0.0-0.2	.15	.32			
	72-80	93	2	2-10	1.50-1.65	5.95-19.98	0.03-0.10	0.0-2.9	0.0-0.2	.15	.32			
3540: Solvay-----	0-5	79	16	3-8	1.50-1.60	2.00-6.00	0.07-0.11	0.0-2.9	0.5-1.0	.17	.17	5	3	86
	5-14	62	19	13-34	1.50-1.80	0.20-2.00	0.15-0.18	0.0-2.9	0.0-0.8	.28	.28			
	14-23	63	19	13-34	1.50-1.80	0.20-2.00	0.15-0.18	0.0-2.9	0.0-0.5	.28	.28			
	23-37	66	20	13-34	1.50-1.80	0.20-2.00	0.15-0.18	0.0-2.9	0.0-0.5	.28	.28			
	37-58	63	26	7-22	1.50-1.80	2.00-6.00	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24			
	58-76	83	6	7-22	1.50-1.80	2.00-6.00	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24			
	76-80	84	6	7-22	1.50-1.80	2.00-6.00	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24			
3550: Spelvin-----	0-5	86	7	3-7	1.45-1.60	6.00-19.99	0.10-0.12	0.0-2.9	0.0-1.0	.15	.15	5	2	134
	5-23	70	10	20-30	1.50-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.28	.28			
	23-34	76	8	14-30	1.50-1.60	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.28	.28			
	34-50	78	8	13-19	1.45-1.60	2.00-6.00	0.12-0.14	0.0-2.9	0.0-0.0	.20	.20			
	50-58	85	6	5-12	1.50-1.65	1.98-19.98	0.07-0.12	0.0-2.9	0.0-0.0	.15	.15			
	58-80	95	2	0-5	1.50-1.65	5.95-19.98	0.02-0.07	0.0-2.9	0.0-0.0	.05	.05			



PHYSICAL PROPERTIES OF THE SOILS--Continued  
Reno County, Kansas: Published

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
3639: Taver-----	0-7	36	44	17-25	1.30-1.55	0.60-2.00	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	7-17	15	49	35-45	1.35-1.60	0.00-0.06	0.12-0.18	6.0-8.9	0.0-2.0	.37	.37			
	17-33	5	55	35-45	1.35-1.60	0.00-0.06	0.12-0.18	6.0-8.9	0.0-2.0	.37	.37			
	33-53	5	56	35-45	1.35-1.60	0.00-0.06	0.12-0.18	6.0-8.9	0.0-2.0	.37	.37			
	53-64	30	35	20-35	1.45-1.65	0.20-0.60	0.15-0.19	0.0-2.9	0.5-1.0	.28	.28			
	64-80	50	22	20-30	1.45-1.65	0.60-2.00	0.15-0.19	0.0-2.9	0.5-1.0	.28	.28			
3640: Tivin-----	0-7	98	1	0-2	1.35-1.50	6.00-19.98	0.07-0.09	0.0-2.9	0.0-1.0	.15	.15	5	1	220
	7-18	97	1	0-2	1.35-1.50	5.95-19.98	0.02-0.08	0.0-2.9	0.0-0.5	.10	.10			
	18-80	97	1	0-3	1.50-1.70	5.95-19.98	0.02-0.08	0.0-2.9	0.0-0.0	.10	.10			
3641: Tivin-----	0-7	97	1	0-2	1.35-1.50	6.00-19.98	0.07-0.09	0.0-2.9	0.0-1.0	.15	.15	5	1	220
	7-18	97	1	0-2	1.35-1.50	5.95-19.98	0.02-0.08	0.0-2.9	0.0-0.5	.10	.10			
	18-80	97	0	0-3	1.50-1.70	5.95-19.98	0.02-0.08	0.0-2.9	0.0-0.0	.10	.10			
Dillhut-----	0-4	92	6	1-3	1.40-1.55	6.00-19.99	0.02-0.10	0.0-2.9	0.0-1.0	.15	.15	5	1	220
	4-9	95	4	1-3	1.40-1.55	5.95-19.98	0.02-0.10	0.0-2.9	0.0-1.0	.15	.15			
	9-18	96	3	1-3	1.40-1.55	5.95-19.98	0.02-0.10	0.0-2.9	0.0-0.5	.15	.15			
	18-26	93	5	1-3	1.40-1.55	5.95-19.98	0.02-0.10	0.0-2.9	0.0-0.5	.15	.15			
	26-41	70	16	13-30	1.40-1.55	0.60-2.00	0.12-0.15	0.0-2.9	0.0-0.0	.24	.24			
	41-55	75	15	10-21	1.55-1.65	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.0	.17	.17			
	55-65	77	13	9-17	1.55-1.65	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.0	.17	.17			
	65-70	57	25	10-20	1.55-1.65	2.00-6.00	0.11-0.15	0.0-2.9	0.0-0.0	.17	.17			
	70-80	76	15	5-15	1.45-1.60	5.95-19.98	0.08-0.12	0.0-2.9	0.0-0.0	.15	.15			
3642: Tivin-----	0-11	97	1	0-2	1.35-1.50	6.00-19.99	0.07-0.09	0.0-2.9	0.0-1.0	.15	.15	5	1	220
	11-53	97	0	0-3	1.35-1.50	6.00-19.99	0.02-0.08	0.0-2.9	0.0-0.5	.10	.10			
	53-63	23	66	10-20	1.45-1.55	2.00-6.00	0.16-0.19	0.0-2.9	0.0-0.5	.20	.20			
	63-80	97	3	0-3	1.50-1.70	6.00-19.99	0.02-0.05	0.0-2.9	0.0-0.0	.05	.05			
Willowbrook, occasionally flooded-----	0-4	62-75	20	8-18	1.45-1.80	2.00-6.00	0.16-0.18	0.0-2.9	1.0-2.0	.20	.20	4	3	86
	4-9	62-75	21	8-18	1.45-1.80	2.00-6.00	0.16-0.18	0.0-2.9	1.0-2.0	.20	.20			
	9-13	64-78	20	5-15	1.50-1.80	2.00-6.00	0.16-0.19	0.0-2.9	0.5-1.0	.20	.20			
	13-17	64-78	20	5-15	1.50-1.80	2.00-6.00	0.16-0.19	0.0-2.9	0.5-1.0	.20	.20			
	17-19	50-76	38	5-15	1.50-1.80	2.00-6.00	0.13-0.17	0.0-2.9	0.2-1.0	.24	.24			
	19-26	50-76	21	5-15	1.50-1.80	2.00-6.00	0.13-0.17	0.0-2.9	0.2-1.0	.24	.24			
	26-45	88-	3	0-5	1.60-1.80	6.00-19.99	0.02-0.07	0.0-2.9	0.0-0.5	.05	.05			
		100												
	45-51	86-	1	0-1	1.60-1.80	6.00-19.99	0.02-0.05	0.0-2.9	0.0-0.1	.05	.05			
		100												
	51-80	86-	1	0-1	1.60-1.80	6.00-19.99	0.02-0.05	0.0-2.9	0.0-0.0	.05	.05			
		100												
3643: Tobin-----	0-6			18-27	1.30-1.40	0.60-2.00	0.20-0.24	0.0-2.9	1.0-4.0	.32	.32	5	6	48
	6-15			18-30	1.30-1.40	0.60-2.00	0.20-0.24	0.0-2.9	1.0-4.0	.32	.32			
	15-34			18-35	1.35-1.50	0.60-2.00	0.17-0.20	3.0-5.9	1.0-4.0	.32	.32			
	34-47			18-35	1.35-1.45	0.60-2.00	0.18-0.22	3.0-5.9	0.0-0.5	.43	.43			
	47-80			18-35	1.35-1.45	0.60-2.00	0.18-0.22	3.0-5.9	0.0-0.5	.43	.43			
3644: Turon-----	0-8	88	8	1-5	1.40-1.55	6.00-19.99	0.02-0.10	0.0-2.9	0.0-1.0	.15	.15	5	1	220
	8-28	88	4	3-10	1.40-1.55	5.95-19.98	0.09-0.12	0.0-2.9	0.5-1.0	.17	.17			
	28-40	88	3	2-18	1.40-1.55	1.98-19.98	0.10-0.15	0.0-2.9	0.0-0.0	.24	.24			
	40-58	11	49	27-41	1.45-1.60	0.00-0.60	0.12-0.18	3.0-5.9	0.0-0.5	.32	.32			
	58-75	6	53	27-45	1.45-1.60	0.00-0.60	0.12-0.18	3.0-5.9	0.0-0.5	.32	.32			
	75-80	4	54	27-45	1.45-1.60	0.00-0.60	0.12-0.18	3.0-5.9	0.0-0.5	.32	.32			
Carway-----	0-7	84	10	2-10	1.50-1.60	6.00-19.99	0.05-0.09	0.0-2.9	0.5-1.0	.17	.17	5	2	134
	7-10	61	19	20-29	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	10-15	61	18	20-29	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	15-22	64	17	18-29	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	22-35	63	18	18-29	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	35-40	34	36	28-45	1.40-1.60	0.00-0.06	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	40-54	32	33	30-45	1.40-1.60	0.00-0.06	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	54-63	30	30	30-45	1.40-1.60	0.00-0.06	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	63-72	30	32	30-45	1.40-1.60	0.00-0.06	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	72-80	28	40	15-34	1.45-1.65	0.60-2.00	0.13-0.18	0.0-2.9	0.0-0.5	.28	.28			



PHYSICAL PROPERTIES OF THE SOILS--Continued  
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(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										K	Kf	T		
	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
3760: Urban Land, Protected---	---			---	---	---	---	---	---	---	---	---	---	---
Blazefork, Protected---	0-3	6	58	35-50	1.20-1.45	0.20-0.60	0.21-0.23	6.0-8.9	2.0-4.0	.37	.37	5	7	38
	3-7	6	57	35-50	1.35-1.45	0.20-0.60	0.21-0.23	6.0-8.9	2.0-4.0	.37	.37			
	7-14	7	50	35-50	1.25-1.55	0.06-0.20	0.11-0.14	6.0-8.9	1.0-2.0	.43	.43			
	14-22	6	50	35-50	1.25-1.55	0.06-0.20	0.11-0.14	6.0-8.9	1.0-2.0	.43	.43			
	22-29	7	48	35-50	1.25-1.55	0.06-0.20	0.11-0.14	6.0-8.9	1.0-2.0	.43	.43			
	29-34	8	48	35-50	1.25-1.55	0.06-0.20	0.11-0.14	6.0-8.9	0.5-2.0	.43	.43			
	34-40	8	50	35-50	1.30-1.55	0.20-0.60	0.15-0.18	3.0-5.9	0.5-1.0	.32	.32			
	40-48	16	49	35-50	1.35-1.55	0.20-0.60	0.15-0.18	3.0-5.9	0.2-1.0	.32	.32			
	48-61	23	48	26-35	1.35-1.55	0.20-0.60	0.15-0.18	3.0-5.9	0.1-1.0	.32	.32			
	61-80	31	43	18-27	1.35-1.55	0.20-0.60	0.15-0.18	3.0-5.9	0.1-1.0	.32	.32			
Kaskan, Protected---	0-7	34	44	18-26	1.35-1.45	0.60-2.00	0.20-0.23	0.0-2.9	2.0-4.0	.28	.28	4	6	48
	7-17	25	46	27-35	1.35-1.45	0.60-2.00	0.21-0.23	3.0-5.9	2.0-4.0	.37	.37			
	17-24	52	28	18-26	1.45-1.55	0.60-2.00	0.17-0.19	0.0-2.9	1.0-2.0	.28	.28			
	24-35	63	25	10-17	1.45-1.55	2.00-6.00	0.14-0.17	0.0-2.9	0.0-1.0	.24	.24			
	35-41	79	15	0-8	1.50-1.60	5.95-19.98	0.06-0.09	0.0-2.9	0.0-0.5	.10	.10			
	41-47	93	4	0-8	1.50-1.60	5.95-19.98	0.06-0.09	0.0-2.9	0.0-0.5	.10	.10			
	47-66	94	4	0-8	1.50-1.60	5.95-19.98	0.06-0.09	0.0-2.9	0.0-0.5	.10	.10			
	66-80	97	2	0-2	1.55-1.65	5.95-19.98	0.02-0.05	0.0-2.9	0.0-0.0	.05	.05			
3762: Urban Land---	---			---	---	---	---	---	---	---	---	---	---	---
Darlow-----	0-5	42	48	8-20	1.30-1.55	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.43	.43	2	5	56
	5-8	36	53	8-20	1.30-1.70	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.32	.32			
	8-14	32	47	20-30	1.30-1.45	0.20-0.60	0.09-0.13	3.0-5.9	1.0-3.0	.28	.28			
	14-20	26	46	20-30	1.30-1.45	0.20-0.60	0.09-0.13	3.0-5.9	0.8-3.0	.28	.28			
	20-26	30	44	20-30	1.30-1.45	0.20-0.60	0.09-0.13	3.0-5.9	0.2-3.0	.28	.28			
	26-33	34	42	20-35	1.30-1.50	0.00-0.06	0.09-0.13	0.0-2.9	0.0-2.0	.28	.28			
	33-44	38	38	20-35	1.30-1.50	0.00-0.06	0.09-0.13	0.0-2.9	0.0-2.0	.28	.28			
	44-53	39	36	12-27	1.30-1.60	0.20-0.60	0.10-0.16	0.0-2.9	0.0-1.0	.24	.24			
	53-68	49	35	12-27	1.30-1.80	0.20-0.60	0.10-0.16	0.0-2.9	0.0-1.0	.24	.24			
	68-80	75	14	8-12	1.50-1.80	0.60-2.00	0.02-0.10	0.0-2.9	0.0-0.5	.20	.20			
Elmer-----	0-6	53	36	10-17	1.50-1.70	2.00-6.00	0.17-0.20	0.0-2.9	1.0-2.0	.32	.32	2	3	86
	6-9	51	34	10-17	1.50-1.70	2.00-6.00	0.17-0.20	0.0-2.9	1.0-2.0	.28	.28			
	9-19	53	30	10-17	1.50-1.75	2.00-6.00	0.17-0.20	0.0-2.9	1.0-2.0	.28	.28			
	19-26	60	21	17-25	1.55-1.65	0.20-0.60	0.12-0.16	0.0-2.9	0.5-1.0	.32	.32			
	26-37	65	18	17-25	1.55-1.70	0.20-0.60	0.12-0.16	0.0-2.9	0.0-1.0	.32	.32			
	37-41	40	35	20-28	1.50-1.60	0.06-0.20	0.12-0.16	6.0-8.9	0.0-0.5	.37	.37			
	41-51	25	47	20-28	1.50-1.60	0.06-0.20	0.12-0.16	6.0-8.9	0.0-0.5	.37	.37			
	51-61	52	28	14-20	1.60-1.80	0.20-0.60	0.10-0.16	0.0-2.9	0.0-0.5	.28	.28			
	61-72	68	17	14-20	1.60-1.80	0.20-0.60	0.10-0.16	0.0-2.9	0.0-0.5	.28	.28			
	72-80	72	14	14-20	1.60-1.80	0.20-0.60	0.10-0.16	0.0-2.9	0.0-0.5	.28	.28			
3763: Urban Land, Protected---	---			---	---	---	---	---	---	---	---	---	---	---
Imano, Protected---	0-10	29	38	27-35	1.30-1.40	0.20-0.60	0.17-0.19	3.0-5.9	1.0-3.0	.28	.28	4	4L	86
	10-25	42	31	18-35	1.35-1.45	0.20-0.60	0.16-0.19	3.0-5.9	0.5-1.0	.28	.28			
	25-55	91	4	1-8	1.45-1.55	5.95-19.98	0.02-0.10	0.0-2.9	0.0-0.5	.15	.15			
	55-80	98	1	1-5	1.45-1.55	5.95-19.98	0.02-0.10	0.0-2.9	0.0-0.5	.15	.15			
3764: Urban Land, Protected---	---			---	---	---	---	---	---	---	---	---	---	---
Mahone, Protected---	0-8	75	21	3-11	1.50-1.60	6.00-19.99	0.07-0.11	0.0-2.9	0.0-0.8	.17	.17	5	2	134
	8-14	74	21	3-11	1.50-1.60	5.95-19.98	0.07-0.11	0.0-2.9	0.0-0.8	.17	.17			
	14-20	72	23	5-17	1.45-1.55	2.00-6.00	0.14-0.18	0.0-2.9	0.0-1.0	.24	.24			
	20-25	54	40	5-17	1.45-1.55	2.00-6.00	0.14-0.18	0.0-2.9	0.0-1.0	.24	.24			
	25-33	32	61	7-17	1.45-1.55	2.00-6.00	0.14-0.18	0.0-2.9	0.0-1.0	.24	.24			
	33-39	16	74	8-17	1.45-1.55	2.00-6.00	0.14-0.18	0.0-2.9	0.0-1.0	.24	.24			
	39-42	26	40	18-34	1.30-1.50	0.60-2.00	0.18-0.22	0.0-2.9	1.0-2.0	.32	.32			
	42-48	63	28	8-34	1.30-1.50	0.60-2.00	0.18-0.22	0.0-2.9	1.0-2.0	.32	.32			
	48-54	59	28	12-28	1.45-1.55	2.00-6.00	0.14-0.19	0.0-2.9	0.0-0.5	.24	.24			
	54-61	53	35	12-28	1.45-1.55	2.00-6.00	0.14-0.19	0.0-2.9	0.0-0.5	.24	.24			
	61-66	66	23	10-28	1.45-1.55	2.00-6.00	0.14-0.19	0.0-2.9	0.0-0.5	.24	.24			
	66-71	68	21	10-28	1.45-1.55	2.00-6.00	0.14-0.19	0.0-2.9	0.0-0.5	.24	.24			
	71-78	76	16	0-10	1.55-1.65	5.95-19.98	0.02-0.07	0.0-2.9	0.0-0.0	.05	.05			
	78-80	91	6	0-4	1.55-1.65	5.95-19.98	0.02-0.07	0.0-2.9	0.0-0.0	.05	.05			



PHYSICAL PROPERTIES OF THE SOILS--Continued  
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Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
3765: Urban Land---	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
Saltcreek----	0-5	67	20	10-19	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	1.0-2.0	.20	.20	5	3	86
	5-10	58	20	10-27	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	1.0-2.0	.20	.20			
	10-26	58	21	16-28	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.0-1.0	.28	.28			
	26-39	63	18	16-28	1.40-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.0-1.0	.28	.28			
	39-56	17	42	28-42	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	56-66	8	56	28-42	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
	66-80	10	59	28-42	1.40-1.60	0.06-0.20	0.10-0.17	6.0-8.9	0.0-0.5	.37	.37			
Naron-----	0-7	74	16	8-15	1.45-1.55	2.00-6.00	0.14-0.18	0.0-2.9	1.0-3.0	.20	.20	5	3	86
	7-19	70	18	8-15	1.45-1.55	2.00-6.00	0.14-0.18	0.0-2.9	1.0-3.0	.20	.20			
	19-34	45	35	18-28	1.45-1.55	2.00-6.00	0.15-0.18	0.0-2.9	0.0-0.5	.32	.32			
	34-41	65	15	18-28	1.45-1.55	0.60-2.00	0.15-0.18	0.0-2.9	0.0-0.5	.32	.32			
	41-61	70	20	2-15	1.55-1.60	2.00-6.00	0.10-0.15	0.0-2.9	0.0-0.0	.15	.15			
	61-80	90	6	0-5	1.55-1.60	5.95-19.98	0.05-0.07	0.0-2.9	0.0-0.0	.05	.05			
3766: Urban Land, Protected---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Saxman, Protected---	0-4	79	15	1-7	1.50-1.60	5.95-19.98	0.10-0.12	0.0-2.9	0.0-1.3	.20	.20	5	2	134
	4-8	80	15	1-7	1.50-1.70	5.95-19.98	0.10-0.12	0.0-2.9	0.0-1.0	.20	.20			
	8-13	78	14	1-8	1.50-1.70	6.00-19.99	0.10-0.12	0.0-2.9	0.0-1.0	.17	.17			
	13-22	81	12	0-7	1.50-1.60	5.95-19.98	0.06-0.11	0.0-2.9	0.0-0.6	.17	.17			
	22-30	90	6	0-7	1.50-1.75	5.95-19.98	0.06-0.11	0.0-2.9	0.0-0.5	.17	.17			
	30-37	96	4	0-3	1.55-1.65	5.95-19.98	0.02-0.07	0.0-2.9	0.0-0.1	.15	.15			
	37-48	96	4	0-3	1.55-1.65	5.95-19.98	0.02-0.07	0.0-2.9	0.0-0.1	.15	.15			
	48-54	97	3	0-3	1.55-1.65	5.95-19.98	0.02-0.07	0.0-2.9	0.0-0.1	.15	.15			
	54-80	97	3	0-1	1.55-1.65	5.95-19.98	0.02-0.05	0.0-2.9	0.0-0.1	.05	.05			
3767: Urban Land, Protected---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Willowbrook, Protected---	0-4	62-75	20	8-18	1.45-1.80	2.00-6.00	0.16-0.18	0.0-2.9	1.0-2.0	.20	.20	4	3	86
	4-9	62-75	21	8-18	1.45-1.80	2.00-6.00	0.16-0.18	0.0-2.9	1.0-2.0	.20	.20			
	9-13	64-78	20	5-15	1.50-1.80	2.00-6.00	0.16-0.19	0.0-2.9	0.5-1.0	.20	.20			
	13-17	50-78	20	5-15	1.50-1.80	2.00-6.00	0.16-0.19	0.0-2.9	0.5-1.0	.20	.20			
	17-19	50-76	38	5-15	1.50-1.80	2.00-6.00	0.13-0.17	0.0-2.9	0.2-1.0	.24	.24			
	19-26	56-76	21	5-15	1.50-1.80	2.00-6.00	0.13-0.17	0.0-2.9	0.2-1.0	.24	.24			
	26-45	88-100	3	0-5	1.60-1.80	6.00-19.99	0.02-0.07	0.0-2.9	0.0-0.5	.05	.05			
	45-51	86-100	1	0-1	1.60-1.80	6.00-19.99	0.02-0.05	0.0-2.9	0.0-0.1	.05	.05			
	51-80	86-100	1	0-1	1.60-1.80	6.00-19.99	0.02-0.05	0.0-2.9	0.0-0.0	.05	.05			
3768: Urban Land, Protected---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Yaggy, Protected---	0-5	54	38	5-12	1.50-1.60	2.00-6.00	0.16-0.18	0.0-2.9	0.5-1.0	.20	.20	3	3	86
	5-11	69	24	5-12	1.50-1.60	2.00-6.00	0.16-0.18	0.0-2.9	0.5-1.0	.20	.20			
	11-14	31	54	8-26	1.45-1.55	0.60-2.00	0.17-0.20	0.0-2.9	0.0-1.0	.24	.24			
	14-24	98	2	0-2	1.55-1.65	5.95-19.98	0.04-0.06	0.0-2.9	0.0-0.1	.05	.05			
	24-31	94	5	0-2	1.55-1.65	5.95-19.98	0.04-0.06	0.0-2.9	0.0-0.1	.05	.05			
	31-42	97	3	0-2	1.55-1.65	5.95-19.98	0.04-0.06	0.0-2.9	0.0-0.1	.05	.05			
	42-53	96	4	0-1	1.60-1.70	5.95-19.98	0.02-0.05	0.0-2.9	0.0-0.1	.05	.05			
	53-69	99	1	0-1	1.60-1.70	5.95-19.98	0.02-0.05	0.0-2.9	0.0-0.0	.05	.05			
	69-80	99	1	0-1	1.60-1.70	5.95-19.98	0.02-0.05	0.0-2.9	0.0-0.1	.05	.05			
3900: Walnut-----	0-2	52	29	8-20	1.45-1.55	2.00-6.00	0.11-0.15	0.0-2.9	0.5-1.0	.20	.20	5	3	86
	2-5	58	23	18-29	1.50-1.60	0.60-2.00	0.16-0.19	0.0-2.9	0.5-1.0	.28	.28			
	5-11	66	16	18-29	1.50-1.60	0.60-2.00	0.16-0.19	0.0-2.9	0.5-1.0	.28	.28			
	11-15	65	17	12-21	1.40-1.60	2.00-6.00	0.15-0.18	0.0-2.9	0.0-0.5	.20	.20			
	15-22	73	13	12-17	1.40-1.60	2.00-6.00	0.15-0.18	0.0-2.9	0.0-0.5	.20	.20			
	22-37	73	14	12-17	1.40-1.60	2.00-6.00	0.15-0.18	0.0-2.9	0.0-0.5	.20	.20			
	37-60	87	7	2-15	1.50-1.60	1.98-19.98	0.07-0.11	0.0-2.9	0.0-0.5	.15	.15			
	60-80	90	6	2-15	1.50-1.60	1.98-19.98	0.07-0.11	0.0-2.9	0.0-0.5	.15	.15			
3926: Water-----	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3966: Willowbrook--	0-4	62-75	20	8-18	1.45-1.80	2.00-6.00	0.16-0.18	0.0-2.9	1.0-2.0	.20	.20	4	3	86
	4-9	62-75	21	8-18	1.45-1.80	2.00-6.00	0.16-0.18	0.0-2.9	1.0-2.0	.20	.20			
	9-13	64-78	20	5-15	1.50-1.80	2.00-6.00	0.16-0.19	0.0-2.9	0.5-1.0	.20	.20			
	13-17	50-78	20	5-15	1.50-1.80	2.00-6.00	0.16-0.19	0.0-2.9	0.5-1.0	.20	.20			
	17-19	50-76	38	5-15	1.50-1.80	2.00-6.00	0.13-0.17	0.0-2.9	0.2-1.0	.24	.24			
	19-26	50-76	21	5-15	1.50-1.80	2.00-6.00	0.13-0.17	0.0-2.9	0.2-1.0	.24	.24			
	26-45	88-100	3	0-5	1.60-1.80	6.00-19.99	0.02-0.07	0.0-2.9	0.0-0.5	.05	.05			
	45-51	86-100	1	0-1	1.60-1.80	6.00-19.99	0.02-0.05	0.0-2.9	0.0-0.1	.05	.05			
	51-80	86-100	1	0-1	1.60-1.80	6.00-19.99	0.02-0.05	0.0-2.9	0.0-0.0	.05	.05			



PHYSICAL PROPERTIES OF THE SOILS--Continued  
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(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
4004: Yaggy-----	0-5	54	38	5-12	1.50-1.60	2.00-6.00	0.16-0.18	0.0-2.9	0.5-1.0	.20	.20	3	3	86
	5-11	69	24	5-12	1.50-1.60	2.00-6.00	0.16-0.18	0.0-2.9	0.5-1.0	.20	.20			
	11-14	31	54	8-26	1.45-1.55	0.60-2.00	0.17-0.20	0.0-2.9	0.0-1.0	.24	.24			
	14-24	98	2	0-2	1.55-1.65	5.95-19.98	0.04-0.06	0.0-2.9	0.0-0.1	.05	.05			
	24-31	94	5	0-2	1.55-1.65	5.95-19.98	0.04-0.06	0.0-2.9	0.0-0.1	.05	.05			
	31-42	97	3	0-2	1.55-1.65	5.95-19.98	0.04-0.06	0.0-2.9	0.0-0.1	.05	.05			
	42-53	96	4	0-1	1.60-1.70	5.95-19.98	0.02-0.05	0.0-2.9	0.0-0.1	.05	.05			
	53-69	99	1	0-1	1.60-1.70	5.95-19.98	0.02-0.05	0.0-2.9	0.0-0.0	.05	.05			
	69-80	99	1	0-1	1.60-1.70	5.95-19.98	0.02-0.05	0.0-2.9	0.0-0.1	.05	.05			
4005: Yaggy-----	0-5	54	38	5-12	1.50-1.60	2.00-6.00	0.16-0.18	0.0-2.9	0.5-1.0	.20	.20	3	3	86
	5-11	69	24	5-12	1.50-1.60	2.00-6.00	0.16-0.18	0.0-2.9	0.5-1.0	.20	.20			
	11-14	31	54	8-26	1.45-1.55	0.60-2.00	0.17-0.20	0.0-2.9	0.0-1.0	.24	.24			
	14-24	98	2	0-2	1.55-1.65	5.95-19.98	0.04-0.06	0.0-2.9	0.0-0.1	.05	.05			
	24-31	94	5	0-2	1.55-1.65	5.95-19.98	0.04-0.06	0.0-2.9	0.0-0.1	.05	.05			
	31-42	97	3	0-2	1.55-1.65	5.95-19.98	0.04-0.06	0.0-2.9	0.0-0.1	.05	.05			
	42-53	96	4	0-1	1.60-1.70	5.95-19.98	0.02-0.05	0.0-2.9	0.0-0.1	.05	.05			
	53-69	99	1	0-1	1.60-1.70	5.95-19.98	0.02-0.05	0.0-2.9	0.0-0.0	.05	.05			
	69-80	99	1	0-1	1.60-1.70	5.95-19.98	0.02-0.05	0.0-2.9	0.0-0.1	.05	.05			
Saxman-----	0-4	79	15	1-7	1.50-1.60	5.95-19.98	0.10-0.12	0.0-2.9	0.0-1.3	.20	.20	5	2	134
	4-8	80	15	1-7	1.50-1.70	5.95-19.98	0.10-0.12	0.0-2.9	0.0-1.0	.20	.20			
	8-13	78	14	1-8	1.50-1.70	6.00-19.99	0.10-0.12	0.0-2.9	0.0-1.0	.17	.17			
	13-22	81	12	0-7	1.50-1.60	5.95-19.98	0.06-0.11	0.0-2.9	0.0-0.6	.17	.17			
	22-30	90	6	0-7	1.50-1.75	5.95-19.98	0.06-0.11	0.0-2.9	0.0-0.5	.17	.17			
	30-37	96	4	0-3	1.55-1.65	5.95-19.98	0.02-0.07	0.0-2.9	0.0-0.1	.15	.15			
	37-48	96	4	0-3	1.55-1.65	5.95-19.98	0.02-0.07	0.0-2.9	0.0-0.1	.15	.15			
	48-54	97	3	0-3	1.55-1.65	5.95-19.98	0.02-0.07	0.0-2.9	0.0-0.1	.15	.15			
	54-80	97	3	0-1	1.55-1.65	5.95-19.98	0.02-0.05	0.0-2.9	0.0-0.1	.05	.05			
4110: Zellmont----	0-8	66	23	11-19	1.35-1.50	0.60-2.00	0.13-0.21	0.0-2.9	1.0-2.0	.20	.20	3	3	86
	8-18	49	28	20-34	1.40-1.55	0.20-0.60	0.14-0.21	3.0-5.9	0.0-1.0	.28	.28			
	18-26	54	22	10-28	1.50-1.65	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.5	.28	.32			
	26-32	46	19	20-35	1.40-1.55	0.20-0.60	0.14-0.18	3.0-5.9	0.0-0.5	.28	.28			
	32-80			---	1.85-2.00	0.06-0.20	---	---	---	---	---			
Poxmash-----	0-5	73	19	7-15	1.35-1.45	2.00-6.00	0.16-0.18	0.0-2.9	0.8-2.0	.20	.20	4	3	86
	5-9	71	20	7-15	1.35-1.45	2.00-6.00	0.16-0.18	0.0-2.9	0.5-1.5	.20	.20			
	9-15	77	11	10-18	1.45-1.55	2.00-6.00	0.12-0.18	0.0-2.9	0.2-1.0	.20	.20			
	15-20	87	6	4-15	1.45-1.60	2.00-6.00	0.09-0.12	0.0-2.9	0.0-0.5	.17	.17			
	20-33	90	4	2-10	1.50-1.65	5.95-19.98	0.03-0.10	0.0-2.9	0.0-0.0	.15	.15			
	33-48	96	2	2-10	1.50-1.65	5.95-19.98	0.03-0.10	0.0-2.9	0.0-0.0	.15	.15			
	48-80			---	1.85-2.00	0.06-0.20	---	---	---	---	---			



CHEMICAL PROPERTIES OF THE SOILS  
Reno County, Kansas

The Chemical Properties table shows estimates of some characteristics and features that affect soil behavior. These estimates are given for the major layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils. Depth to the upper and lower boundaries of each layer is indicated.

Cation-exchange capacity is the total amount of extractable bases that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. Soils having a high cation-exchange capacity can retain cations. The ability to retain cations helps to prevent the pollution of ground water.

Effective cation-exchange capacity refers to the sum of extractable bases plus aluminum expressed in terms of milliequivalents per 100 grams of soil. It is determined for soils that have pH of less than 5.5.

Soil reaction is a measure of acidity or alkalinity and is expressed as a range in pH values. The range in pH of each major horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Calcium carbonate equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil. Incorporating nitrogen fertilizer into calcareous soils helps to prevent nitrite accumulation and ammonium-N volatilization.

Gypsum is expressed as a percent, by weight, of hydrated calcium sulfates in the fraction of the soil less than 20 millimeters in size. Gypsum is partially soluble in water and can be dissolved and removed by water. Soils that have a high content of gypsum may collapse if the gypsum is removed by percolating water.

Salinity is a measure of soluble salts in the soil at saturation. It is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25 degrees C. Estimates are based on field and laboratory measurements at representative sites of nonirrigated soils. The salinity of irrigated soils is affected by the quality of the irrigation water and by the frequency of water application. Hence, the salinity of soils in individual fields can differ greatly from the value given in the table. Salinity affects the suitability of a soil for crop production, the stability of soil if used as construction material, and the potential of the soil to corrode metal and concrete.

Sodium adsorption ratio (SAR) is a measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration. Soils that have SAR values of 13 or more may be characterized by an increased dispersion of organic matter and clay particles, reduced permeability and aeration, and a general degradation of soil structure.



CHEMICAL PROPERTIES OF THE SOILS--Continued  
Reno County, Kansas

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Map symbol and soil name	Depth	Cation- exchange capacity	Effective Cation Exchange Capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm		
990: Abbyville-----	0-8	10-25	---	7.4-8.4	0	0	0.0-2.0	2-8
	8-15	15-20	---	7.9-9.0	0-1	0	2.0-8.0	13-25
	15-24	20-35	---	7.9-9.0	1-5	0	2.0-8.0	13-30
	24-35	20-35	---	7.9-9.0	1-5	0	2.0-8.0	13-30
	35-49	20-35	---	7.9-9.0	1-5	0	2.0-8.0	13-30
	49-61	15-35	---	7.9-9.0	0-5	0	2.0-4.0	4-15
	61-69	15-35	---	7.9-9.0	0-5	0	2.0-4.0	4-15
	69-80	15-35	---	7.9-9.0	0-5	0	2.0-4.0	4-15
991: Abbyville, rarely flooded-	0-8	10-20	---	7.4-8.4	0	0	0.0-2.0	2-8
	8-15	15-20	---	7.9-9.0	0-1	0	2.0-8.0	13-25
	15-24	20-35	---	7.9-9.0	1-5	0	2.0-8.0	13-30
	24-35	20-35	---	7.9-9.0	1-5	0	2.0-8.0	13-30
	35-49	20-35	---	7.9-9.0	1-5	0	2.0-8.0	13-30
	49-61	15-35	---	7.9-9.0	0-5	0	2.0-4.0	4-15
	61-69	15-35	---	7.9-9.0	0-5	0	2.0-4.0	4-15
	69-80	15-35	---	7.9-9.0	0-5	0	2.0-4.0	4-15
Kisiwa, occasionally flooded-----	0-4	10-25	---	7.4-9.0	0-2	0	1.0-4.0	2-11
	4-7	10-25	---	7.4-9.0	0-2	0	1.0-4.0	2-8
	7-14	14-26	---	7.9-9.0	5-10	0	1.0-8.0	15-30
	14-23	14-26	---	7.9-9.0	5-10	0	1.0-8.0	15-30
	23-31	14-30	---	7.9-9.0	5-10	0	2.0-4.0	2-26
	31-40	14-30	---	7.9-9.0	5-10	0	1.0-4.0	2-18
	40-46	14-30	---	7.9-9.0	5-10	0	0.0-4.0	2-15
	46-52	3.0-10	---	7.9-9.0	5-10	0	0.0-4.0	2-4
	52-58	3.0-10	---	7.9-9.0	5-10	0	0.0-4.0	2-4
	58-65	0.0-6.0	---	7.9-9.0	0-2	0	0.0-4.0	2-4
	65-80	0.0-6.0	---	7.9-9.0	0-2	0	0.0-4.0	2-4
1004: Albion-----	0-9	5.0-15	---	5.6-6.5	0	0	0	0
	9-16	5.0-15	---	6.1-7.8	0	0	0	0
	16-27	5.0-15	---	6.1-7.8	0	0	0	0
	27-48	2.0-10	---	6.1-8.4	0	0	0	0
	48-80	2.0-5.0	---	6.1-8.4	0	0	0	0
1011: Albion-----	0-9	5.0-15	---	5.6-6.5	0	0	0	0
	9-16	5.0-15	---	6.1-7.8	0	0	0	0
	16-27	5.0-15	---	6.1-7.8	0	0	0	0
	27-48	2.0-10	---	6.1-8.4	0	0	0	0
	48-80	2.0-5.0	---	6.1-8.4	0	0	0	0
Shellabarger----	0-7	6.0-10	---	5.1-6.5	0	0	0	0
	7-11	9.0-12	---	6.1-7.8	0	0	0	0
	11-19	9.0-12	---	6.1-7.8	0	0	0	0
	19-33	9.0-12	---	6.1-7.8	0	0	0	0
	33-47	2.0-9.0	---	6.1-8.4	0-5	0	0	0
	47-59	2.0-9.0	---	6.1-8.4	0-5	0	0	0
	59-73	2.0-9.0	---	6.1-8.4	0-5	0	0	0
	73-80	2.0-9.0	---	6.1-8.4	0-5	0	0	0
1057: Aquents-----	0-3	21-29	---	5.6-6.0	0	0	0	0
	3-8	9.0-12	---	6.1-7.8	0	0	0	0
	8-12	---	---	7.4-8.4	0	0	0	0
	12-80	---	---	7.4-8.4	0	0	0	0
1061: Arents, Earthen Dam-----	---	---	---	---	---	---	---	---
1062: Arents, Landfill	---	---	---	---	---	---	---	---
1070: Avans-----	0-5	9.0-15	---	5.1-6.0	0	0	0	0
	5-10	9.0-15	---	5.1-6.0	0	0	0	0
	10-14	7.0-15	---	5.1-6.0	0	0	0	0
	14-19	15-25	---	5.6-7.3	0	0	0	0
	19-30	15-25	---	5.6-7.3	0	0	0	0
	30-43	11-15	---	5.6-7.3	0	0	0	0
	43-53	11-15	---	5.6-7.3	0	0	0	0
	53-65	11-15	---	5.6-7.8	0-3	0	0	0
	65-80	11-15	---	5.6-7.8	0-3	0	0	0
1071: Avans-----	0-5	9.0-15	---	5.1-6.0	0	0	0	0
	5-10	9.0-15	---	5.1-6.0	0	0	0	0
	10-14	7.0-15	---	5.1-6.0	0	0	0	0
	14-19	15-25	---	5.6-7.3	0	0	0	0
	19-30	15-25	---	5.6-7.3	0	0	0	0
	30-43	11-15	---	5.6-7.3	0	0	0	0
	43-53	11-15	---	5.6-7.3	0	0	0	0
	53-65	11-15	---	5.6-7.8	0-3	0	0	0
	65-80	11-15	---	5.6-7.8	0-3	0	0	0



CHEMICAL PROPERTIES OF THE SOILS--Continued  
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Map symbol and soil name	Depth	Cation- exchange capacity	Effective Cation Exchange Capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm		
1072: Avans-----	0-5	9.0-15	---	5.1-6.0	0	0	0	0
	5-10	9.0-15	---	5.1-6.0	0	0	0	0
	10-14	7.0-15	---	5.1-6.0	0	0	0	0
	14-19	15-25	---	5.6-7.3	0	0	0	0
	19-30	15-25	---	5.6-7.3	0	0	0	0
	30-43	11-15	---	5.6-7.3	0	0	0	0
	43-53	11-15	---	5.6-7.3	0	0	0	0
	53-65	11-15	---	5.6-7.8	0-3	0	0	0
	65-80	11-15	---	5.6-7.8	0-3	0	0	0
1191: Blazefork-----	0-3	15-32	---	4.5-6.5	0	0	0	0
	3-7	15-32	---	4.5-6.5	0	0	0	0
	7-14	19-40	---	6.1-8.4	0	0	0	0
	14-22	19-40	---	6.1-8.4	0	0	0	0
	22-29	19-40	---	6.1-8.4	0	0	0	0
	29-34	19-40	---	6.1-8.4	0	0	0	0
	34-40	14-30	---	7.4-8.4	0	0	0	0
	40-48	14-26	---	7.4-8.4	0	0	0	0
	48-61	14-26	---	7.4-8.4	0	0	0	0
	61-80	14-26	---	7.4-8.4	0	0	0	0
1192: Blazefork-----	0-3	15-32	---	4.5-6.5	0	0	0	0
	3-7	15-32	---	4.5-6.5	0	0	0	0
	7-14	19-40	---	6.1-8.4	0	0	0	0
	14-22	19-40	---	6.1-8.4	0	0	0	0
	22-29	19-40	---	6.1-8.4	0	0	0	0
	29-34	19-40	---	6.1-8.4	0	0	0	0
	34-40	14-30	---	7.4-8.4	0	0	0	0
	40-48	14-26	---	7.4-8.4	0	0	0	0
	48-61	14-26	---	7.4-8.4	0	0	0	0
	61-80	14-26	---	7.4-8.4	0	0	0	0
Kaskan-----	0-7	11-17	---	6.1-7.3	0	0	0	0
	7-17	20-30	---	6.1-7.3	0	0	0	0
	17-24	10-16	---	6.1-7.8	0	0	0	0
	24-35	6.0-10	---	6.1-7.8	0-1	0	0	0
	35-41	0.0-4.0	---	6.1-7.8	0	0	0	0
	41-47	0.0-4.0	---	6.1-7.8	0	0	0	0
	47-66	0.0-4.0	---	6.1-7.8	0	0	0	0
	66-80	0.0-0.0	---	6.1-7.8	0	0	0	0
1200: Buhler-----	0-3	20-35	---	5.6-7.3	0	0-3	0.0-6.0	0-7
	3-8	20-35	---	5.6-7.3	0	0-3	0.0-4.0	20-30
	8-12	10-15	---	6.1-7.8	0	1-5	0.0-4.0	20-30
	12-16	10-15	---	6.1-7.8	0	1-5	0.0-4.0	20-30
	16-24	12-30	---	6.6-7.8	1-5	0-5	4.0-8.0	20-30
	24-36	12-30	---	6.6-7.8	1-5	0-5	4.0-8.0	15-25
	36-42	12-30	---	6.6-7.8	1-5	0-5	4.0-8.0	10-20
	42-50	15-30	---	7.4-9.0	1-5	0-5	0.0-8.0	10-20
	50-58	15-25	---	7.4-9.0	1-5	0-5	0.0-8.0	10-20
	58-76	8.0-15	---	7.4-8.4	0	0	0.0-4.0	0-15
	76-80	8.0-15	---	7.4-8.4	0	0	0.0-4.0	0-15
Blazefork-----	0-3	15-32	---	4.5-6.5	0	0	0	0
	3-7	15-32	---	4.5-6.5	0	0	0	0
	7-14	19-40	---	6.1-8.4	0	0	0	0
	14-22	19-40	---	6.1-8.4	0	0	0	0
	22-29	19-40	---	6.1-8.4	0	0	0	0
	29-34	19-40	---	6.1-8.4	0	0	0	0
	34-40	14-30	---	7.4-8.4	0	0	0	0
	40-48	14-26	---	7.4-8.4	0	0	0	0
	48-61	14-26	---	7.4-8.4	0	0	0	0
	61-80	14-26	---	7.4-8.4	0	0	0	0
1324: Carway-----	0-7	7.0-12	---	5.6-6.5	0	0	0	0
	7-10	12-18	---	6.1-7.3	0	0	0	0
	10-15	12-18	---	6.1-7.3	0	0	0	0
	15-22	12-18	---	6.1-7.3	0	0	0	0
	22-35	12-18	---	6.1-7.3	0	0	0	0
	35-40	24-35	---	6.6-7.8	0-5	0	0	0
	40-54	24-35	---	6.6-7.8	0-5	0	0	0
	54-63	24-35	---	6.6-7.8	0-5	0	0	0
	63-72	24-35	---	6.6-7.8	0-5	0	0	0
	72-80	9.0-16	---	6.6-7.8	0-5	0	0	0
Carbika-----	0-11	7.0-12	---	6.1-7.3	0	0	0	0
	11-15	28-38	---	6.1-8.4	0-5	0	0	0
	15-22	28-38	---	6.1-8.4	0-5	0	0	0
	22-34	12-16	---	6.1-8.4	0-5	0	0	0
	34-41	12-16	---	6.1-8.4	0-5	0	0	0
	41-60	12-16	---	6.1-8.4	0-5	0	0	0
	60-80	12-16	---	7.4-8.4	0-5	0	0	0



CHEMICAL PROPERTIES OF THE SOILS--Continued  
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Map symbol and soil name	Depth	Cation- exchange capacity	Effective Cation Exchange Capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm		
1357: Carway-----	0-7	1.0-5.0	---	5.6-6.5	0	0	0	0
	7-10	12-18	---	6.1-7.3	0	0	0	0
	10-15	12-18	---	6.1-7.3	0	0	0	0
	15-22	12-18	---	6.1-7.3	0	0	0	0
	22-35	12-18	---	6.1-7.3	0	0	0	0
	35-40	24-35	---	6.6-7.8	0-5	0	0	0
	40-54	24-35	---	6.6-7.8	0-5	0	0	0
	54-63	24-35	---	6.6-7.8	0-5	0	0	0
	63-72	24-35	---	6.6-7.8	0-5	0	0	0
	72-80	9.0-16	---	6.6-7.8	0-5	0	0	0
Solvay-----	0-5	5.0-12	---	6.1-6.5	0	0	0	0
	5-14	8.0-19	---	6.1-7.3	0	0	0	0
	14-23	8.0-19	---	6.1-7.3	0	0	0	0
	23-37	8.0-19	---	6.1-7.3	0	0	0	0
	37-58	5.0-12	---	6.1-7.3	0	0	0	0
	58-76	5.0-12	---	6.1-7.3	0	0	0	0
	76-80	5.0-12	---	6.1-7.3	0	0	0	0
Dillhut-----	0-10	1.0-3.0	---	5.6-6.5	0	0	0	0
	10-29	0.0-2.0	---	5.6-6.5	0	0	0	0
	29-35	10-18	---	6.6-7.3	0	0	0	0
	35-43	10-18	---	6.6-7.3	0	0	0	0
	43-54	17-22	---	6.6-7.3	0	0	0	0
	54-66	17-22	---	6.6-7.3	0	0	0	0
	66-80	17-22	---	6.6-7.3	0	0	0	0
1359: Clark-----	0-11	10-25	---	7.4-8.4	0-5	0	0.0-1.0	0
	11-16	10-25	---	7.4-9.0	5-25	0	0.0-1.0	0
	16-28	10-25	---	7.4-9.0	0-25	0	0.0-1.0	0
	28-45	10-25	---	7.4-9.0	15-45	0	0.0-1.0	0
	45-65	5.0-20	---	7.4-9.0	15-25	0	0.0-1.0	0
	65-80	5.0-20	---	7.4-9.0	15-25	0	0.0-1.0	0
Ost-----	0-8	15-20	---	6.1-8.4	0	0	0	0
	8-12	10-25	---	6.6-8.4	0	0	0	0
	12-18	10-25	---	6.6-8.4	0	0	0	0
	18-23	10-25	---	7.4-8.4	15-34	0	0	0
	23-38	5.0-15	---	7.4-8.4	15-30	0	0	0
	38-54	5.0-15	---	7.4-8.4	15-30	0	0	0
	54-80	5.0-17	---	7.4-8.4	15-30	0	0	0
1428: Crete-----	0-5	16-23	---	5.6-6.0	0	0	0	0
	5-9	20-28	---	5.6-6.0	0	0	0	0
	9-19	25-41	---	6.1-7.3	0	0	0	0
	19-27	25-41	---	6.1-7.3	0	0	0	0
	27-38	25-41	---	6.1-7.3	0	0	0	0
	38-48	18-29	---	7.4-8.4	0-5	0	0	0
	48-80	18-29	---	7.4-8.4	0-5	0	0	0
1429: Crete-----	0-5	16-23	---	5.6-6.0	0	0	0	0
	5-9	20-28	---	5.6-6.0	0	0	0	0
	9-19	25-41	---	6.1-7.3	0	0	0	0
	19-27	25-41	---	6.1-7.3	0	0	0	0
	27-38	25-41	---	6.1-7.3	0	0	0	0
	38-48	18-29	---	7.4-8.4	0-5	0	0	0
	48-80	18-29	---	7.4-8.4	0-5	0	0	0
1553: Darlow-----	0-5	5.0-15	---	4.5-7.8	0	0	0.0-2.0	0-5
	5-8	5.0-15	---	4.5-7.8	0	0	0.0-2.0	0-5
	8-14	15-25	---	6.6-9.0	0-2	0	2.0-8.0	10-40
	14-20	15-25	---	6.6-9.0	0-2	0	2.0-8.0	15-40
	20-26	15-25	---	6.6-9.0	0-2	0	2.0-8.0	15-40
	26-33	15-30	---	7.9-9.0	0-1	0	4.0-16.0	30-40
	33-44	15-30	---	7.9-9.0	0-1	0	4.0-16.0	30-40
	44-53	10-20	---	7.9-8.4	0-1	0	0.0-4.0	25-35
	53-68	10-15	---	7.9-8.4	0-1	0	0.0-4.0	25-35
	68-80	0.0-10	---	7.4-8.4	0-1	0	0.0-2.0	10-30
Elmer-----	0-6	5.0-12	---	4.5-7.3	0	0	0.0-2.0	0-1
	6-9	5.0-12	---	4.5-7.3	0	0	0.0-2.0	0-1
	9-19	5.0-12	---	4.5-7.3	0	0	0.0-2.0	0-1
	19-26	10-18	---	7.4-9.0	0	0	0.0-2.0	7-20
	26-37	10-18	---	7.4-9.0	0	0	1.0-2.0	7-20
	37-43	15-20	---	7.9-9.0	1-2	0	1.0-4.0	20-30
	43-51	15-20	---	7.9-9.0	1-2	0	1.0-4.0	20-30
	51-61	8.0-15	---	7.4-9.0	0-1	0	1.0-2.0	5-25
	61-72	8.0-15	---	7.4-9.0	0-1	0	1.0-2.0	5-20
	72-80	8.0-15	---	7.4-9.0	0-1	0	0.0-2.0	5-20
1554: Dillhut-----	0-10	1.0-3.0	---	5.6-6.5	0	0	0	0
	10-29	0.0-2.0	---	5.6-6.5	0	0	0	0
	29-35	10-18	---	6.6-7.3	0	0	0	0
	35-43	10-18	---	6.6-7.3	0	0	0	0
	43-54	17-22	---	6.6-7.3	0	0	0	0
	54-66	17-22	---	6.6-7.3	0	0	0	0
	66-80	17-22	---	6.6-7.3	0	0	0	0



CHEMICAL PROPERTIES OF THE SOILS--Continued  
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Map symbol and soil name	Depth	Cation- exchange capacity	Effective Cation Exchange Capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm		
1555: Dillhut-----	0-4	1.0-3.0	---	5.6-6.5	0	0	0	0
	4-9	1.0-3.0	---	5.6-6.5	0	0	0	0
	9-18	0.0-2.0	---	5.6-6.5	0	0	0	0
	18-26	0.0-2.0	---	5.6-6.5	0	0	0	0
	26-41	10-18	---	6.6-7.3	0	0	0	0
	41-55	7.0-10	---	6.6-7.3	0	0	0	0
	55-65	7.0-10	---	6.6-7.3	0	0	0	0
	65-70	7.0-10	---	6.6-7.3	0	0	0	0
	70-80	3.0-9.0	---	6.1-7.3	0	0	0	0
Plev-----	0-4	3.0-6.0	---	5.1-6.5	0	0	0	0
	4-12	0.0-3.0	---	5.1-6.5	0	0	0	0
	12-35	0.0-1.0	---	5.6-6.5	0	0	0	0
	35-46	0.0-1.0	---	5.6-6.5	0	0	0	0
	46-57	7.0-15	---	6.1-7.3	0	0	0	0
	57-75	7.0-15	---	6.1-7.3	0	0	0	0
	75-80	3.0-9.0	---	6.1-7.3	0	0	0	0
1556: Dillhut-----	0-4	1.0-3.0	---	5.6-6.5	0	0	0	0
	4-9	1.0-3.0	---	5.6-6.5	0	0	0	0
	9-18	0.0-2.0	---	5.6-6.5	0	0	0	0
	18-26	0.0-2.0	---	5.6-6.5	0	0	0	0
	26-41	10-18	---	6.6-7.3	0	0	0	0
	41-55	7.0-10	---	6.6-7.3	0	0	0	0
	55-65	7.0-10	---	6.6-7.3	0	0	0	0
	65-70	7.0-10	---	6.6-7.3	0	0	0	0
	70-80	3.0-9.0	---	6.1-7.3	0	0	0	0
Solvay-----	0-5	5.0-12	---	6.1-6.5	0	0	0	0
	5-14	8.0-19	---	6.1-7.3	0	0	0	0
	14-23	8.0-19	---	6.1-7.3	0	0	0	0
	23-37	8.0-19	---	6.1-7.3	0	0	0	0
	37-58	5.0-12	---	6.1-7.3	0	0	0	0
	58-76	5.0-12	---	6.1-7.3	0	0	0	0
	76-80	5.0-12	---	6.1-7.3	0	0	0	0
1725: Funmar-----	0-6	7.0-19	---	6.1-7.3	0	0	0	0
	6-12	7.0-19	---	6.1-7.3	0	0	0	0
	12-17	13-19	---	6.6-7.3	0	0	0	0
	17-26	13-19	---	6.6-7.3	0	0	0	0
	26-32	13-19	---	6.6-7.3	0	0	0	0
	32-38	7.0-19	---	6.6-7.8	0	0	0	0
	38-54	24-41	---	6.6-7.8	0-5	0	0	0
	54-66	24-41	---	6.6-7.8	0-5	0	0	0
	66-80	11-18	---	6.6-7.8	0-5	0	0	0
Farnum-----	0-5	9.0-15	---	5.6-7.3	0	0	0	0
	5-15	9.0-15	---	5.6-7.3	0	0	0	0
	15-21	8.0-18	---	6.1-7.8	0	0	0	0
	21-34	10-23	---	6.1-8.4	0	0	0	0
	34-48	10-23	---	6.1-8.4	0	0	0	0
	48-61	10-23	---	6.1-8.4	0	0	0	0
	61-73	10-23	---	6.1-8.4	0	0	0	0
	73-80	4.0-19	---	6.6-8.4	0	0	0	0
1727: Funmar-----	0-6	7.0-19	---	6.1-7.3	0	0	0	0
	6-12	7.0-19	---	6.1-7.3	0	0	0	0
	12-17	13-19	---	6.6-7.3	0	0	0	0
	17-26	13-19	---	6.6-7.3	0	0	0	0
	26-32	13-19	---	6.6-7.3	0	0	0	0
	32-38	7.0-19	---	6.6-7.8	0	0	0	0
	38-54	24-41	---	6.6-7.8	0-5	0	0	0
	54-66	24-41	---	6.6-7.8	0-5	0	0	0
	66-80	11-18	---	6.6-7.8	0-5	0	0	0
Taver-----	0-7	10-15	---	6.1-7.3	0	0	0	0
	7-17	30-40	---	6.6-8.4	0-5	0	0	0
	17-33	30-40	---	6.6-8.4	0-5	0	0	0
	33-53	30-40	---	6.6-8.4	0-5	0	0	0
	53-64	12-17	---	7.4-8.4	0-5	0	0	0
	64-80	12-17	---	7.4-8.4	0-5	0	0	0
1804: Geary-----	0-6	15-30	---	5.6-6.5	0	0	0	0
	6-14	10-30	---	5.6-6.5	0	0	0	0
	14-25	15-25	---	6.1-7.8	0	0	0	0
	25-37	15-25	---	6.1-7.8	0	0	0	0
	37-51	15-25	---	6.1-7.8	0	0	0	0
	51-80	5.0-25	---	6.1-8.4	0	0	0	0
1807: Geary, Moderately Eroded-----	0-5	15-30	---	5.6-6.5	0	0	0	0
	5-19	15-30	---	6.1-7.8	0	0	0	0
	19-43	15-30	---	6.1-7.8	0	0	0	0
	43-50	15-25	---	6.1-8.4	0	0	0	0
	50-80	15-25	---	6.1-8.4	0	0	0	0



CHEMICAL PROPERTIES OF THE SOILS--Continued  
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Map symbol and soil name	Depth	Cation- exchange capacity	Effective Cation Exchange Capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm		
1985:								
Hayes-----	0-8	5.0-8.0	---	5.1-7.3	0	0	0	0
	8-14	6.0-10	---	6.1-7.3	0	0	0	0
	14-23	6.0-10	---	6.1-7.3	0	0	0	0
	23-34	6.0-10	---	6.1-7.3	0	0	0	0
	34-42	6.0-10	---	6.1-7.3	0	0	0	0
	42-47	6.0-10	---	6.1-7.3	0	0	0	0
	47-56	10-15	---	6.6-7.8	0	0	0	0
	56-69	24-35	---	6.6-7.8	0-5	0	0	0
	69-80	24-35	---	6.6-7.8	0-5	0	0	0
1986:								
Hayes-----	0-8	1.0-5.0	---	5.1-7.3	0	0	0	0
	8-14	6.0-10	---	6.1-7.3	0	0	0	0
	14-23	6.0-10	---	6.1-7.3	0	0	0	0
	23-34	6.0-10	---	6.1-7.3	0	0	0	0
	34-42	6.0-10	---	6.1-7.3	0	0	0	0
	42-47	6.0-10	---	6.1-7.3	0	0	0	0
	47-56	10-15	---	6.6-7.8	0	0	0	0
	56-69	24-35	---	6.6-7.8	0-5	0	0	0
	69-80	24-35	---	6.6-7.8	0-5	0	0	0
Solvay-----	0-5	1.0-7.0	---	6.1-6.5	0	0	0	0
	5-14	8.0-19	---	6.1-7.3	0	0	0	0
	14-23	8.0-19	---	6.1-7.3	0	0	0	0
	23-37	8.0-19	---	6.1-7.3	0	0	0	0
	37-58	5.0-12	---	6.1-7.3	0	0	0	0
	58-76	5.0-12	---	6.1-7.3	0	0	0	0
	76-80	5.0-12	---	6.1-7.3	0	0	0	0
1987:								
Hayes-----	0-8	1.0-5.0	---	5.1-7.3	0	0	0	0
	8-14	6.0-10	---	6.1-7.3	0	0	0	0
	14-23	6.0-10	---	6.1-7.3	0	0	0	0
	23-34	6.0-10	---	6.1-7.3	0	0	0	0
	34-42	6.0-10	---	6.1-7.3	0	0	0	0
	42-47	6.0-10	---	6.1-7.3	0	0	0	0
	47-56	10-15	---	6.6-7.8	0	0	0	0
	56-69	24-35	---	6.6-7.8	0-5	0	0	0
	69-80	24-35	---	6.6-7.8	0-5	0	0	0
Turon-----	0-8	1.0-3.0	---	5.1-7.3	0	0	0	0
	8-28	2.0-5.0	---	5.1-7.3	0	0	0	0
	28-40	3.0-7.0	---	5.1-7.3	0	0	0	0
	40-58	24-33	---	6.6-7.8	0	0	0	0
	58-75	24-33	---	6.6-7.8	0	0	0	0
	75-80	24-33	---	6.6-7.8	0	0	0	0
2204:								
Jamash-----	0-4	16-21	---	6.1-7.8	0	0	0	0
	4-11	19-24	---	6.6-8.4	0	0	0	0
	11-15	15-27	---	7.4-8.4	0-2	0	0	0
	15-28	10-20	---	7.4-9.0	15-25	0	0	0
	28-80	10-20	---	7.4-9.0	15-25	0	0	0
Piedmont-----	0-4	16-21	---	6.1-7.3	0	0	0	0
	4-7	16-21	---	6.1-7.3	0	0	0	0
	7-13	19-24	---	6.1-7.8	0	0	0	0
	13-20	19-24	---	6.1-7.8	0	0	0	0
	20-24	21-33	---	6.6-8.4	0-2	0	0	0
	24-32	21-33	---	7.9-8.4	0-5	0	0	0
	32-80	10-20	---	7.4-9.0	15-25	0	0	0
2205:								
Jamash-----	0-4	16-21	---	6.1-7.8	0	0	0	0
	4-11	19-24	---	6.6-8.4	0	0	0	0
	11-15	15-27	---	7.4-8.4	0-2	0	0	0
	15-28	10-20	---	7.4-9.0	15-25	0	0	0
	28-80	10-20	---	7.4-9.0	15-25	0	0	0
Piedmont-----	0-4	16-21	---	6.1-7.3	0	0	0	0
	4-7	16-21	---	6.1-7.3	0	0	0	0
	7-13	19-24	---	6.1-7.8	0	0	0	0
	13-20	19-24	---	6.1-7.8	0	0	0	0
	20-24	21-33	---	6.6-8.4	0-2	0	0	0
	24-32	21-33	---	7.9-8.4	0-5	0	0	0
	32-80	10-20	---	7.4-9.0	15-25	0	0	0
2206:								
Jamash-----	0-4	16-21	---	6.1-7.8	0	0	0	0
	4-11	19-24	---	6.6-8.4	0	0	0	0
	11-15	15-27	---	7.4-8.4	0-2	0	0	0
	15-28	10-20	---	7.4-9.0	15-25	0	0	0
	28-80	10-20	---	7.4-9.0	15-25	0	0	0
Piedmont-----	0-4	16-21	---	6.1-7.3	0	0	0	0
	4-7	16-21	---	6.1-7.3	0	0	0	0
	7-13	19-24	---	6.1-7.8	0	0	0	0
	13-20	19-24	---	6.1-7.8	0	0	0	0
	20-24	21-33	---	6.6-8.4	0-2	0	0	0
	24-32	21-33	---	7.9-8.4	0-5	0	0	0
	32-80	10-20	---	7.4-9.0	15-25	0	0	0



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Map symbol and soil name	Depth	Cation- exchange capacity	Effective Cation Exchange Capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm		
2207: Jamash-----	0-4	16-21	---	6.1-7.8	0	0	0	0
	4-11	19-24	---	6.6-8.4	0	0	0	0
	11-15	15-27	---	7.4-8.4	0-2	0	0	0
	15-28	10-20	---	7.4-9.0	15-25	0	0	0
	28-80	10-20	---	7.4-9.0	15-25	0	0	0
2381: Kanza-----	0-4	2.0-10	---	5.6-6.5	0	0	0	0
	4-9	2.0-10	---	5.6-6.5	0	0	0	0
	9-17	2.0-5.0	---	5.6-6.5	0	0	0	0
	17-33	2.0-5.0	---	5.6-8.4	0-5	0	0	0
	33-80	2.0-5.0	---	5.6-8.4	0-5	0	0	0
Ninnescah-----	0-6	5.0-12	---	7.4-8.4	5-14	0	0.0-2.1	0-1
	6-14	5.0-12	---	7.4-8.4	5-14	0	0.0-2.0	0-1
	14-19	5.0-12	---	7.4-8.4	5-14	0	0.0-2.0	0-1
	19-30	5.0-8.0	---	7.4-8.4	5-11	0	0.0-1.0	0-1
	30-37	5.0-8.0	---	7.4-8.4	5-11	0	0.0-1.0	0-1
	37-52	3.0-8.0	---	6.6-8.4	0-10	0	0.0-1.0	0-1
	52-80	3.0-8.0	---	6.6-8.4	0-10	0	0.0-1.0	0-1
2390: Kaskan-----	0-7	11-17	---	6.1-7.3	0	0	0	0
	7-17	20-30	---	6.1-7.3	0	0	0	0
	17-24	10-16	---	6.1-7.8	0	0	0	0
	24-35	6.0-10	---	6.1-7.8	0-1	0	0	0
	35-41	0.0-4.0	---	6.1-7.8	0	0	0	0
	41-47	0.0-4.0	---	6.1-7.8	0	0	0	0
	47-66	0.0-4.0	---	6.1-7.8	0	0	0	0
	66-80	0.0-0.0	---	6.1-7.8	0	0	0	0
2391: Kaskan-----	0-9	20-30	---	6.1-7.3	0	0	0	0
	9-13	20-30	---	6.1-7.3	0	0	0	0
	13-17	6.0-10	---	6.1-7.8	0-1	0	0	0
	17-21	6.0-10	---	6.1-7.8	0-1	0	0	0
	21-27	6.0-10	---	6.1-7.8	0-1	0	0	0
	27-43	0.0-3.0	---	6.1-7.8	0	0	0	0
	43-57	0.0-8.0	---	6.1-7.8	0-1	0	0	0
	57-80	0.0-8.0	---	6.1-7.8	0-1	0	0	0
2395: Kisiwa-----	0-4	10-25	---	7.4-9.0	0-2	0	1.0-4.0	2-11
	4-7	10-25	---	7.4-9.0	0-2	0	1.0-4.0	2-8
	7-14	14-26	---	7.9-9.0	5-10	0	1.0-8.0	15-30
	14-23	14-26	---	7.9-9.0	5-10	0	1.0-8.0	15-30
	23-31	14-30	---	7.9-9.0	5-10	0	2.0-4.0	2-26
	31-40	14-30	---	7.9-9.0	5-10	0	1.0-4.0	2-18
	40-46	14-30	---	7.9-9.0	5-10	0	0.0-4.0	2-15
	46-52	3.0-10	---	7.9-9.0	5-10	0	0.0-4.0	2-4
	52-58	3.0-10	---	7.9-9.0	5-10	0	0.0-4.0	2-4
	58-65	0.0-6.0	---	7.9-9.0	0-2	0	0.0-4.0	2-4
	65-80	0.0-6.0	---	7.9-9.0	0-2	0	0.0-4.0	2-4
2509: Ladysmith-----	0-8	15-30	---	5.6-7.3	0	0	0	0
	8-21	17-40	---	5.6-7.8	0	0	0	0
	21-31	17-40	---	5.6-7.8	0	0	0	0
	31-45	18-37	---	7.4-8.4	0-1	0	0	0
	45-80	18-37	---	7.4-8.4	0-1	0	0	0
2556: Langdon-----	0-8	0.0-3.0	---	5.1-7.3	0	0	0	0
	8-47	0.0-4.0	---	5.1-7.3	0	0	0	0
	47-64	0.0-1.0	---	5.1-7.3	0	0	0	0
	64-80	0.0-4.0	---	4.5-6.5	0	0	0	0
2587: Imano-----	0-10	15-25	---	7.4-8.4	1-5	0	0	0
	10-25	10-25	---	7.4-8.4	1-5	0	0	0
	25-55	1.0-5.0	---	7.4-9.0	1-5	0	0	0
	55-80	1.0-5.0	---	7.4-9.0	1-5	0	0	0
2588: Longford, Moderately Eroded-----	0-6	15-25	---	5.6-7.3	0	0	0	0
	6-11	15-25	---	6.1-7.3	0	0	0	0
	11-28	15-30	---	6.1-7.3	0	0	0	0
	28-43	15-30	---	6.1-7.3	0	0	0	0
	43-60	10-20	---	6.1-7.8	0	0	0	0
	60-80	10-20	---	6.1-7.8	0	0	0	0



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Map symbol and soil name	Depth	Cation- exchange capacity	Effective Cation Exchange Capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm		
2812: Mahone-----	0-8	1.0-5.0	---	5.1-7.3	0	0	0	0
	8-14	1.0-5.0	---	5.1-7.3	0	0	0	0
	14-20	6.0-10	---	6.1-7.3	0	0	0	0
	20-25	6.0-10	---	6.1-7.3	0	0	0	0
	25-33	6.0-10	---	6.1-7.3	0	0	0	0
	33-39	6.0-10	---	6.1-8.4	0	0	0	0
	39-42	12-21	---	7.4-8.4	0-1	0	0	0
	42-48	12-21	---	7.4-8.4	0-1	0	0	0
	48-54	8.0-16	---	7.4-8.4	0-1	0	0	0
	54-61	8.0-16	---	7.4-8.4	0-1	0	0	0
	61-66	8.0-16	---	7.4-8.4	0-1	0	0	0
	66-71	8.0-16	---	7.4-8.4	0-1	0	0	0
	71-78	0.0-3.0	---	6.6-8.4	0	0	0	0
	78-80	0.0-3.0	---	6.6-8.4	0	0	0	0
2948: Nalim-----	0-6	9.0-15	---	5.6-7.3	0	0	0	0
	6-9	9.0-20	---	5.6-7.3	0	0	0	0
	9-13	15-25	---	5.6-8.4	0	0	0	0
	13-21	15-24	---	5.6-8.4	0	0	0	0
	21-31	15-20	---	5.6-8.4	0	0	0	0
	31-39	7.0-20	---	5.6-8.4	0	0	0	0
	39-44	7.0-20	---	5.6-8.4	0	0	0	0
	44-52	3.0-20	---	5.6-8.4	0	0	0	0
	52-62	2.0-10	---	5.6-7.3	0	0	0	0
	62-72	2.0-10	---	5.6-7.3	0	0	0	0
	72-80	2.0-5.0	---	5.6-7.3	0	0	0	0
2949: Naron, Moderately Eroded-----	0-8	5.0-15	---	5.6-7.3	0	0	0	0
	8-28	10-15	---	5.6-7.8	0	0	0	0
	28-39	10-15	---	5.6-7.8	0	0	0	0
	39-55	10-15	---	5.6-7.8	0	0	0	0
	55-66	5.0-10	---	6.1-8.4	0	0	0	0
	66-80	5.0-10	---	6.1-8.4	0	0	0	0
2950: Naron, Moderately Eroded-----	0-8	5.0-15	---	5.6-7.3	0	0	0	0
	8-28	10-15	---	5.6-7.8	0	0	0	0
	28-39	10-15	---	5.6-7.8	0	0	0	0
	39-55	10-15	---	5.6-7.8	0	0	0	0
	55-66	5.0-10	---	6.1-8.4	0	0	0	0
	66-80	5.0-10	---	6.1-8.4	0	0	0	0
2951: Nash-----	0-8	6.0-11	---	6.1-8.4	0	---	0	0
	8-19	6.0-11	---	6.1-8.4	0	---	0	0
	19-28	6.0-11	---	6.1-8.4	0-2	---	0	0
	28-80	---	0.0-0.0	---	0-2	---	0	0
2952: Nash-----	0-8	6.0-11	---	6.1-8.4	0	---	0	0
	8-19	6.0-11	---	6.1-8.4	0	---	0	0
	19-28	6.0-11	---	6.1-8.4	0-2	---	0	0
	28-80	---	0.0-0.0	---	0-2	---	0	0
Lucien-----	0-6	6.0-17	---	7.4-8.4	0-2	0	0	0
	6-12	6.0-17	---	7.4-8.4	0-2	0	0	0
	12-80	---	0.0-0.0	7.4-8.4	0-2	0	0	0
2953: Nash, Moderately Eroded-----	0-8	6.0-11	---	6.1-8.4	0	---	0	0
	8-19	6.0-11	---	6.1-8.4	0	---	0	0
	19-28	6.0-11	---	6.1-8.4	0-2	---	0	0
	28-80	---	0.0-0.0	---	0-2	---	0	0
Lucien-----	0-6	6.0-17	---	7.4-8.4	0-2	0	0	0
	6-12	6.0-17	---	7.4-8.4	0-2	0	0	0
	12-80	---	0.0-0.0	7.4-8.4	0-2	0	0	0
2955: Nickerson-----	0-6	5.0-10	---	5.1-7.3	0	0	0	0
	6-12	10-15	---	5.6-7.3	0	0	0	0
	12-18	7.0-12	---	5.6-7.3	0-5	0	0	0
	18-29	0.0-7.0	---	6.1-7.8	1-5	0	0	0
	29-34	0.0-7.0	---	7.4-8.4	1-5	0	0	0
	34-38	0.0-7.0	---	7.4-8.4	1-5	0	0	0
	38-45	0.0-7.0	---	6.6-8.4	1-5	0	0	0
	45-53	0.0-7.0	---	6.6-8.4	1-5	0	0	0
	53-57	0.0-7.0	---	6.6-8.4	1-5	0	0	0
	57-80	0.0-7.0	---	6.6-8.4	1-5	0	0	0



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Map symbol and soil name	Depth	Cation- exchange capacity	Effective Cation Exchange Capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm		
2956: Nickerson-----	0-6	1.0-7.0	---	5.1-7.3	0	0	0	0
	6-12	10-15	---	5.6-7.3	0	0	0	0
	12-18	7.0-12	---	5.6-7.3	0-5	0	0	0
	18-29	0.0-7.0	---	6.1-7.8	1-5	0	0	0
	29-34	0.0-7.0	---	7.4-8.4	1-5	0	0	0
	34-38	0.0-7.0	---	7.4-8.4	1-5	0	0	0
	38-45	0.0-7.0	---	6.6-8.4	1-5	0	0	0
	45-53	0.0-7.0	---	6.6-8.4	1-5	0	0	0
	53-57	0.0-7.0	---	6.6-8.4	1-5	0	0	0
	57-80	0.0-7.0	---	6.6-8.4	1-5	0	0	0
2957: Nickerson-----	0-6	5.0-10	---	5.1-7.3	0	0	0	0
	6-12	10-15	---	5.6-7.3	0	0	0	0
	12-18	7.0-12	---	5.6-7.3	0-5	0	0	0
	18-29	0.0-7.0	---	6.1-7.8	1-5	0	0	0
	29-34	0.0-7.0	---	7.4-8.4	1-5	0	0	0
	34-38	0.0-7.0	---	7.4-8.4	1-5	0	0	0
	38-45	0.0-7.0	---	6.6-8.4	1-5	0	0	0
	45-53	0.0-7.0	---	6.6-8.4	1-5	0	0	0
	53-57	0.0-7.0	---	6.6-8.4	1-5	0	0	0
	57-80	0.0-7.0	---	6.6-8.4	1-5	0	0	0
Punkin-----	0-6	5.0-15	---	6.6-7.8	0	0	0.0-2.0	2-8
	6-14	5.0-15	---	6.6-7.8	0	0	0.0-2.0	2-8
	14-22	25-55	---	7.9-8.4	0	0	2.0-4.0	13-25
	22-32	25-55	---	7.9-8.4	0	0	2.0-4.0	13-25
	32-41	12-15	---	6.6-8.4	1-5	0	2.0-8.0	13-25
	41-51	12-15	---	6.6-8.4	1-5	0	2.0-8.0	13-25
	51-63	0.0-2.0	---	7.9-8.4	0	0	0.0-2.0	0
	63-80	0.0-2.0	---	6.6-8.4	0	0	0	0
2958: Ninnescah-----	0-6	5.0-12	---	7.4-8.4	5-14	0	0.0-2.1	0-1
	6-14	5.0-12	---	7.4-8.4	5-14	0	0.0-2.0	0-1
	14-19	5.0-12	---	7.4-8.4	5-14	0	0.0-2.0	0-1
	19-30	5.0-8.0	---	7.4-8.4	5-11	0	0.0-1.0	0-1
	30-37	5.0-8.0	---	7.4-8.4	5-11	0	0.0-1.0	0-1
	37-52	3.0-8.0	---	6.6-8.4	0-10	0	0.0-1.0	0-1
	52-80	3.0-8.0	---	6.6-8.4	0-10	0	0.0-1.0	0-1
2959: Ninnescah, saline-----	0-6	5.0-12	---	7.4-8.4	5-14	0	4.0-8.0	1-5
	6-14	5.0-12	---	7.4-8.4	5-14	0	4.0-8.0	1-5
	14-19	5.0-12	---	7.4-8.4	5-14	0	4.0-8.0	1-5
	19-30	5.0-8.0	---	7.4-8.4	5-11	0	4.0-8.0	1-5
	30-37	5.0-8.0	---	7.4-8.4	5-11	0	4.0-8.0	1-5
	37-52	3.0-8.0	---	6.6-8.4	0-10	0	0.0-2.0	1-5
	52-80	3.0-8.0	---	6.6-8.4	0-10	0	0.0-2.0	1-5
3051: Ost-----	0-8	15-20	---	6.1-8.4	0	0	0	0
	8-12	10-25	---	6.6-8.4	0	0	0	0
	12-18	10-25	---	6.6-8.4	0	0	0	0
	18-23	10-25	---	7.4-8.4	15-34	0	0	0
	23-38	5.0-15	---	7.4-8.4	15-30	0	0	0
	38-54	5.0-15	---	7.4-8.4	15-30	0	0	0
	54-80	5.0-17	---	7.4-8.4	15-30	0	0	0
3052: Ost-----	0-8	15-20	---	6.1-8.4	0	0	0	0
	8-12	10-25	---	6.6-8.4	0	0	0	0
	12-18	10-25	---	6.6-8.4	0	0	0	0
	18-23	10-25	---	7.4-8.4	15-34	0	0	0
	23-38	5.0-15	---	7.4-8.4	15-30	0	0	0
	38-54	5.0-15	---	7.4-8.4	15-30	0	0	0
	54-80	5.0-17	---	7.4-8.4	15-30	0	0	0
Clark-----	0-11	10-25	---	7.4-8.4	0-5	0	0	0
	11-16	10-25	---	7.4-9.0	5-25	0	0	0
	16-28	10-25	---	7.4-9.0	0-25	0	0	0
	28-45	10-25	---	7.4-9.0	15-45	0	0	0
	45-65	5.0-20	---	7.4-9.0	15-25	0	0	0
	65-80	5.0-20	---	7.4-9.0	15-25	0	0	0
3170: Penalosa-----	0-5	10-16	---	5.1-7.3	0	0	0	0
	5-10	10-16	---	5.1-7.3	0	0	0	0
	10-14	17-21	---	6.1-8.4	0	0	0	0
	14-22	17-21	---	6.1-8.4	0	0	0	0
	22-28	21-30	---	6.6-8.4	0-2	0	0	0
	28-34	21-30	---	6.6-8.4	0-2	0	0	0
	34-39	21-30	---	6.6-8.4	0-2	0	0	0
	39-48	10-16	---	6.6-8.4	0	0	0	0
	48-61	21-30	---	6.6-8.4	0-10	0	0	0
	61-71	21-30	---	6.6-8.4	0-10	0	0	0
	71-80	21-30	---	6.6-8.4	0-10	0	0	0



CHEMICAL PROPERTIES OF THE SOILS--Continued  
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Map symbol and soil name	Depth	Cation- exchange capacity	Effective Cation Exchange Capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm		
3171: Penalosa-----	0-5	10-16	---	5.1-7.3	0	0	0	0
	5-10	10-16	---	5.1-7.3	0	0	0	0
	10-14	17-21	---	6.1-8.4	0	0	0	0
	14-22	17-21	---	6.1-8.4	0	0	0	0
	22-28	21-30	---	6.6-8.4	0-2	0	0	0
	28-34	21-30	---	6.6-8.4	0-2	0	0	0
	34-39	21-30	---	6.6-8.4	0-2	0	0	0
	39-48	10-16	---	6.6-8.4	0	0	0	0
	48-61	21-30	---	6.6-8.4	0-10	0	0	0
	61-71	21-30	---	6.6-8.4	0-10	0	0	0
	71-80	21-30	---	6.6-8.4	0-10	0	0	0
3180: Pratt-----	0-8	0.0-3.0	0.0-0.0	5.6-7.3	0	0	0	0
	8-24	2.0-5.0	0.0-0.0	5.6-7.3	0	0	0	0
	24-64	3.0-7.0	0.0-0.0	5.6-7.3	0	0	0	0
	64-80	1.0-3.0	0.0-0.0	6.1-7.3	0	0	0	0
3181: Pratt-----	0-8	0.0-3.0	0.0-0.0	5.6-7.3	0	0	0	0
	8-24	2.0-5.0	0.0-0.0	5.6-7.3	0	0	0	0
	24-64	3.0-7.0	0.0-0.0	5.6-7.3	0	0	0	0
	64-80	1.0-3.0	0.0-0.0	6.1-7.3	0	0	0	0
Turon-----	0-8	1.0-3.0	---	5.1-7.3	0	0	0	0
	8-28	2.0-5.0	---	5.1-7.3	0	0	0	0
	28-40	3.0-7.0	---	5.1-7.3	0	0	0	0
	40-58	24-33	---	6.6-7.8	0	0	0	0
	58-75	24-33	---	6.6-7.8	0	0	0	0
	75-80	24-33	---	6.6-7.8	0	0	0	0
3190: Punkin-----	0-4	10-30	---	6.6-7.8	0	0	0.0-2.0	2-8
	4-8	10-30	---	6.6-7.8	0	0	0.0-2.0	2-8
	8-15	10-30	---	7.4-8.4	0	0	0.0-2.0	13-25
	15-21	10-30	---	7.4-8.4	0	0	2.0-4.0	13-25
	21-39	25-55	---	7.4-8.4	1-5	0	2.0-4.0	13-25
	39-47	25-50	---	7.4-8.4	1-5	1-5	2.0-8.0	13-25
	47-64	25-50	---	7.4-8.4	1-5	1-5	2.0-8.0	13-25
	64-78	15-35	---	6.6-8.4	0	0	4.0-8.0	20-40
	78-80	15-35	---	6.6-8.4	0	0	4.0-8.0	20-40
3191: Punkin-----	0-4	10-30	---	6.6-7.8	0	0	0.0-2.0	2-8
	4-8	10-30	---	6.6-7.8	0	0	0.0-2.0	2-8
	8-15	10-30	---	7.4-8.4	0	0	0.0-2.0	13-25
	15-21	10-30	---	7.4-8.4	0	0	2.0-4.0	13-25
	21-39	25-55	---	7.4-8.4	1-5	0	2.0-4.0	13-25
	39-47	25-50	---	7.4-8.4	1-5	1-5	2.0-8.0	13-25
	47-64	25-50	---	7.4-8.4	1-5	1-5	2.0-8.0	13-25
	64-78	15-35	---	6.6-8.4	0	0	4.0-8.0	20-40
	78-80	15-35	---	6.6-8.4	0	0	4.0-8.0	20-40
Taver-----	0-7	10-15	---	6.1-7.3	0	0	0	0
	7-17	30-40	---	6.6-8.4	0-5	0	0	0
	17-33	30-40	---	6.6-8.4	0-5	0	0	0
	33-53	30-40	---	6.6-8.4	0-5	0	0	0
	53-64	12-17	---	7.4-8.4	0-5	0	0	0
	64-80	12-17	---	7.4-8.4	0-5	0	0	0
3403: Sand Pit-----	---	---	---	---	---	---	---	---
3469: Smolan-----	0-5	15-20	---	5.6-7.3	0	0	0	0
	5-8	10-20	---	5.6-7.3	0	0	0	0
	8-15	10-20	---	5.6-7.3	0	0	0	0
	15-29	17-25	---	5.6-7.8	0	0	0	0
	29-38	17-25	---	5.6-7.8	0	0	0	0
	38-49	17-25	---	5.6-7.8	0	0	0	0
	49-80	14-18	---	6.6-7.8	0	0	0	0



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Map symbol and soil name	Depth	Cation- exchange capacity	Effective Cation Exchange Capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm		
3510: Saltcreek-----	0-5	5.0-10	---	4.5-6.6	0	0	0	0
	5-10	5.0-10	---	4.5-6.6	0	0	0	0
	10-26	10-18	---	6.1-7.3	0	0	0	0
	26-39	10-18	---	6.1-7.3	0	0	0	0
	39-56	24-35	---	6.1-8.4	0-5	0	0	0
	56-66	24-35	---	6.1-8.4	0-5	0	0	0
	66-80	24-35	---	6.1-8.4	0-5	0	0	0
Funmar-----	0-6	7.0-19	---	6.1-7.3	0	0	0	0
	6-12	7.0-19	---	6.1-7.3	0	0	0	0
	12-17	13-19	---	6.6-7.3	0	0	0	0
	17-26	13-19	---	6.6-7.3	0	0	0	0
	26-32	13-19	---	6.6-7.3	0	0	0	0
	32-38	7.0-19	---	6.6-7.8	0	0	0	0
	38-54	24-41	---	6.6-7.8	0-5	0	0	0
	54-66	24-41	---	6.6-7.8	0-5	0	0	0
	66-80	11-18	---	6.6-7.8	0-5	0	0	0
Farnum-----	0-5	9.0-15	---	5.6-7.3	0	0	0	0
	5-15	9.0-15	---	5.6-7.3	0	0	0	0
	15-21	8.0-18	---	6.1-7.8	0	0	0	0
	21-34	10-23	---	6.1-8.4	0	0	0	0
	34-48	10-23	---	6.1-8.4	0	0	0	0
	48-61	10-23	---	6.1-8.4	0	0	0	0
	61-73	10-23	---	6.1-8.4	0	0	0	0
	73-80	4.0-19	---	6.6-8.4	0	0	0	0
3511: Saltcreek-----	0-5	5.0-10	---	4.5-6.6	0	0	0	0
	5-10	5.0-10	---	4.5-6.6	0	0	0	0
	10-26	10-18	---	6.1-7.3	0	0	0	0
	26-39	10-18	---	6.1-7.3	0	0	0	0
	39-56	24-35	---	6.1-8.4	0-5	0	0	0
	56-66	24-35	---	6.1-8.4	0-5	0	0	0
	66-80	24-35	---	6.1-8.4	0-5	0	0	0
Naron, sandy substratum-----	0-7	6.0-10	---	5.6-7.3	0	0	0	0
	7-19	6.0-10	---	5.6-7.3	0	0	0	0
	19-34	12-17	---	5.6-7.8	0	0	0	0
	34-41	12-17	---	5.6-7.8	0	0	0	0
	41-61	4.0-10	---	6.1-8.4	0-5	0	0	0
	61-80	0.0-1.0	---	6.1-8.4	0-1	0	0	0
3512: Saltcreek-----	0-5	5.0-10	---	4.5-6.6	0	0	0	0
	5-10	5.0-10	---	4.5-6.6	0	0	0	0
	10-26	10-18	---	6.1-7.3	0	0	0	0
	26-39	10-18	---	6.1-7.3	0	0	0	0
	39-56	24-35	---	6.1-8.4	0-5	0	0	0
	56-66	24-35	---	6.1-8.4	0-5	0	0	0
	66-80	24-35	---	6.1-8.4	0-5	0	0	0
Naron-----	0-8	5.0-15	---	5.6-7.3	0	0	0	0
	8-14	5.0-15	---	5.6-7.3	0	0	0	0
	14-28	10-15	---	5.6-7.8	0	0	0	0
	28-39	10-15	---	5.6-7.8	0	0	0	0
	39-55	10-15	---	5.6-7.8	0	0	0	0
	55-66	5.0-10	---	6.1-8.4	0	0	0	0
	66-80	5.0-10	---	6.1-8.4	0	0	0	0
3520: Saxman-----	0-4	1.0-5.0	1.0-5.0	4.5-6.0	0	0	0	0
	4-8	1.0-5.0	1.0-5.0	4.5-6.0	0	0	0	0
	8-13	1.0-5.0	1.0-5.0	4.5-6.0	0	0	0	0
	13-22	1.0-4.0	---	6.6-8.4	0	0	0	0
	22-30	1.0-4.0	---	6.6-8.4	0	0	0	0
	30-37	0.0-2.0	---	6.6-8.4	0	0	0	0
	37-48	0.0-2.0	---	6.6-8.4	0	0	0	0
	48-54	0.0-2.0	---	6.6-8.4	0	0	0	0
	54-80	0.0-0.0	---	6.6-8.4	0	0	0	0
3530: Shellabarger, Eroded-----	0-5	6.0-10	---	5.1-6.5	0	0	0	0
	5-11	9.0-12	---	6.1-7.8	0	0	0	0
	11-19	9.0-12	---	6.1-7.8	0	0	0	0
	19-33	9.0-12	---	6.1-7.8	0	0	0	0
	33-47	2.0-9.0	---	6.1-8.4	0-5	0	0	0
	47-59	2.0-9.0	---	6.1-8.4	0-5	0	0	0
	59-73	2.0-9.0	---	6.1-8.4	0-5	0	0	0
	73-80	2.0-9.0	---	6.1-8.4	0-5	0	0	0
Albion-----	0-9	5.0-15	---	5.6-6.5	0	0	0	0
	9-16	5.0-15	---	6.1-7.8	0	0	0	0
	16-27	5.0-15	---	6.1-7.8	0	0	0	0
	27-48	2.0-10	---	6.1-8.4	0	0	0	0
	48-80	2.0-5.0	---	6.1-8.4	0	0	0	0



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Map symbol and soil name	Depth	Cation- exchange capacity	Effective Cation Exchange Capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm		
3531: Shellabarger, Moderately Eroded-----	0-6	6.0-10	---	5.1-6.5	0	0	0	0
	6-11	9.0-12	---	6.1-7.8	0	0	0	0
	11-19	9.0-12	---	6.1-7.8	0	0	0	0
	19-33	9.0-12	---	6.1-7.8	0	0	0	0
	33-47	2.0-9.0	---	6.1-8.4	0-5	0	0	0
	47-59	2.0-9.0	---	6.1-8.4	0-5	0	0	0
	59-73	2.0-9.0	---	6.1-8.4	0-5	0	0	0
	73-80	2.0-9.0	---	6.1-8.4	0-5	0	0	0
Nalim-----	0-6	9.0-15	---	5.6-7.3	0	0	0	0
	6-9	9.0-20	---	5.6-7.3	0	0	0	0
	9-13	15-25	---	5.6-8.4	0	0	0	0
	13-21	15-24	---	5.6-8.4	0	0	0	0
	21-31	15-20	---	5.6-8.4	0	0	0	0
	31-39	7.0-20	---	5.6-8.4	0	0	0	0
	39-44	7.0-20	---	5.6-8.4	0	0	0	0
	44-52	3.0-20	---	5.6-8.4	0	0	0	0
	52-62	2.0-10	---	5.6-7.3	0	0	0	0
	62-72	2.0-10	---	5.6-7.3	0	0	0	0
	72-80	2.0-5.0	---	5.6-7.3	0	0	0	0
3532: Shellabarger----	0-6	4.0-7.0	---	5.1-6.5	0	0	0	0
	6-11	9.0-12	---	6.1-7.8	0	0	0	0
	11-19	9.0-12	---	6.1-7.8	0	0	0	0
	19-33	9.0-12	---	6.1-7.8	0	0	0	0
	33-47	2.0-9.0	---	6.1-8.4	0-5	0	0	0
	47-59	2.0-9.0	---	6.1-8.4	0-5	0	0	0
	59-73	2.0-9.0	---	6.1-8.4	0-5	0	0	0
	73-80	2.0-9.0	---	6.1-8.4	0-5	0	0	0
3533: Shellabarger----	0-7	6.0-10	---	5.1-6.5	0	0	0	0
	7-11	9.0-12	---	6.1-7.8	0	0	0	0
	11-19	9.0-12	---	6.1-7.8	0	0	0	0
	19-33	9.0-12	---	6.1-7.8	0	0	0	0
	33-47	2.0-9.0	---	6.1-8.4	0-5	0	0	0
	47-59	2.0-9.0	---	6.1-8.4	0-5	0	0	0
	59-73	2.0-9.0	---	6.1-8.4	0-5	0	0	0
	73-80	2.0-9.0	---	6.1-8.4	0-5	0	0	0
3534: Shellabarger----	0-7	6.0-10	---	5.1-6.5	0	0	0	0
	7-11	9.0-12	---	6.1-7.8	0	0	0	0
	11-19	9.0-12	---	6.1-7.8	0	0	0	0
	19-33	9.0-12	---	6.1-7.8	0	0	0	0
	33-47	2.0-9.0	---	6.1-8.4	0-5	0	0	0
	47-59	2.0-9.0	---	6.1-8.4	0-5	0	0	0
	59-73	2.0-9.0	---	6.1-8.4	0-5	0	0	0
	73-80	2.0-9.0	---	6.1-8.4	0-5	0	0	0
3535: Shellabarger----	0-7	6.0-10	---	5.1-6.5	0	0	0	0
	7-11	9.0-12	---	6.1-7.8	0	0	0	0
	11-19	9.0-12	---	6.1-7.8	0	0	0	0
	19-33	9.0-12	---	6.1-7.8	0	0	0	0
	33-47	2.0-9.0	---	6.1-8.4	0-5	0	0	0
	47-59	2.0-9.0	---	6.1-8.4	0-5	0	0	0
	59-73	2.0-9.0	---	6.1-8.4	0-5	0	0	0
	73-80	2.0-9.0	---	6.1-8.4	0-5	0	0	0
Nalim-----	0-6	9.0-15	---	5.6-7.3	0	0	0	0
	6-9	9.0-20	---	5.6-7.3	0	0	0	0
	9-13	15-25	---	5.6-8.4	0	0	0	0
	13-21	15-24	---	5.6-8.4	0	0	0	0
	21-31	15-20	---	5.6-8.4	0	0	0	0
	31-39	7.0-20	---	5.6-8.4	0	0	0	0
	39-44	7.0-20	---	5.6-8.4	0	0	0	0
	44-52	3.0-20	---	5.6-8.4	0	0	0	0
	52-62	2.0-10	---	5.6-7.3	0	0	0	0
	62-72	2.0-10	---	5.6-7.3	0	0	0	0
	72-80	2.0-5.0	---	5.6-7.3	0	0	0	0
3540: Solvay-----	0-5	1.0-7.0	---	6.1-6.5	0	0	0	0
	5-14	8.0-19	---	6.1-7.3	0	0	0	0
	14-23	8.0-19	---	6.1-7.3	0	0	0	0
	23-37	8.0-19	---	6.1-7.3	0	0	0	0
	37-58	5.0-12	---	6.1-7.3	0	0	0	0
	58-76	5.0-12	---	6.1-7.3	0	0	0	0
	76-80	5.0-12	---	6.1-7.3	0	0	0	0
3550: Spelvin-----	0-5	2.0-5.0	---	5.1-6.5	0	0	0	0
	5-23	12-17	---	5.1-7.3	0	0	0	0
	23-34	12-17	---	5.1-7.3	0	0	0	0
	34-50	8.0-12	---	5.1-7.3	0	0	0	0
	50-58	3.0-8.0	---	5.1-7.3	0	0	0	0
	58-80	0.0-3.0	---	5.1-7.3	0	0	0	0



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Map symbol and soil name	Depth	Cation- exchange capacity	Effective Cation Exchange Capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm		
3639: Taver-----	0-7	10-15	---	6.1-7.3	0	0	0	0
	7-17	30-40	---	6.6-8.4	0-5	0	0	0
	17-33	30-40	---	6.6-8.4	0-5	0	0	0
	33-53	30-40	---	6.6-8.4	0-5	0	0	0
	53-64	12-17	---	7.4-8.4	0-5	0	0	0
	64-80	12-17	---	7.4-8.4	0-5	0	0	0
3640: Tivin-----	0-7	0.0-1.0	---	5.6-6.5	0	0	0	0
	7-18	0.0-1.0	---	6.1-7.3	0	0	0	0
	18-80	0.0-1.0	---	6.1-7.3	0	0	0	0
3641: Tivin-----	0-7	0.0-1.0	---	5.6-6.5	0	0	0.0-1.0	0
	7-18	0.0-1.0	---	6.1-7.3	0	0	0.0-1.0	0
	18-80	0.0-1.0	---	6.1-7.3	0	0	0.0-1.0	0
Dillhut-----	0-4	1.0-3.0	---	5.6-6.5	0	0	0	0
	4-9	1.0-3.0	---	5.6-6.5	0	0	0	0
	9-18	0.0-2.0	---	5.6-6.5	0	0	0	0
	18-26	0.0-2.0	---	5.6-6.5	0	0	0	0
	26-41	10-18	---	6.6-7.3	0	0	0	0
	41-55	7.0-10	---	6.6-7.3	0	0	0	0
	55-65	7.0-10	---	6.6-7.3	0	0	0	0
	65-70	7.0-10	---	6.6-7.3	0	0	0	0
	70-80	3.0-9.0	---	6.1-7.3	0	0	0	0
3642: Tivin-----	0-11	0.0-1.0	---	5.6-6.5	0	0	0	0
	11-53	0.0-1.0	---	6.1-7.3	0	0	0	0
	53-63	7.0-11	---	6.1-7.8	0-3	0	0	0
	63-80	0.0-1.0	---	6.1-7.8	0-2	0	0	0
Willowbrook, occasionally flooded-----	0-4	5.0-11	---	5.6-8.4	0	0	0	0
	4-9	5.0-11	---	5.6-8.4	0	0	0	0
	9-13	5.0-11	---	5.6-8.4	0	0	0	0
	13-17	5.0-11	---	5.6-8.4	0	0	0	0
	17-19	3.0-10	---	7.4-8.4	0-5	0	0	0
	19-26	3.0-10	---	7.4-8.4	0-5	0	0	0
	26-45	0.0-3.0	---	7.4-8.4	0	0	0	0
	45-51	0.0-2.0	---	7.4-8.4	0	0	0	0
	51-80	0.0-2.0	---	7.4-8.4	0	0	0	0
3643: Tobin-----	0-6	18-20	---	5.6-7.8	0	0	0	0
	6-15	18-20	---	5.6-7.8	0	0	0	0
	15-34	13-20	---	7.4-8.4	0	0	0	0
	34-47	13-20	---	7.4-8.4	0	0	0	0
	47-80	13-20	---	7.4-8.4	0	0	0	0
3644: Turon-----	0-8	1.0-3.0	---	5.1-7.3	0	0	0	0
	8-28	2.0-5.0	---	5.1-7.3	0	0	0	0
	28-40	3.0-7.0	---	5.1-7.3	0	0	0	0
	40-58	24-33	---	6.6-7.8	0	0	0	0
	58-75	24-33	---	6.6-7.8	0	0	0	0
	75-80	24-33	---	6.6-7.8	0	0	0	0
Carway-----	0-7	1.0-5.0	---	5.6-6.5	0	0	0	0
	7-10	12-18	---	6.1-7.3	0	0	0	0
	10-15	12-18	---	6.1-7.3	0	0	0	0
	15-22	12-18	---	6.1-7.3	0	0	0	0
	22-35	12-18	---	6.1-7.3	0	0	0	0
	35-40	24-35	---	6.6-7.8	0-5	0	0	0
	40-54	24-35	---	6.6-7.8	0-5	0	0	0
	54-63	24-35	---	6.6-7.8	0-5	0	0	0
	63-72	24-35	---	6.6-7.8	0-5	0	0	0
	72-80	9.0-16	---	6.6-7.8	0-5	0	0	0



CHEMICAL PROPERTIES OF THE SOILS--Continued  
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Map symbol and soil name	Depth	Cation- exchange capacity	Effective Cation Exchange Capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm		
3760: Urban Land, Protected----- Blazefork, Protected-----	---	---	---	---	---	---	---	---
	0-3	15-32	---	4.5-6.5	0	0	0	0
	3-7	15-32	---	4.5-6.5	0	0	0	0
	7-14	19-40	---	6.1-8.4	0	0	0	0
	14-22	19-40	---	6.1-8.4	0	0	0	0
	22-29	19-40	---	6.1-8.4	0	0	0	0
	29-34	19-40	---	6.1-8.4	0	0	0	0
	34-40	14-30	---	7.4-8.4	0	0	0	0
	40-48	14-26	---	7.4-8.4	0	0	0	0
	48-61	14-26	---	7.4-8.4	0	0	0	0
	61-80	14-26	---	7.4-8.4	0	0	0	0
Kaskan, Protected-----	0-7	11-17	---	6.1-7.3	0	0	0	0
	7-17	20-30	---	6.1-7.3	0	0	0	0
	17-24	10-16	---	6.1-7.8	0	0	0	0
	24-35	6.0-10	---	6.1-7.8	0-1	0	0	0
	35-41	0.0-4.0	---	6.1-7.8	0	0	0	0
	41-47	0.0-4.0	---	6.1-7.8	0	0	0	0
	47-66	0.0-4.0	---	6.1-7.8	0	0	0	0
	66-80	0.0-0.0	---	6.1-7.8	0	0	0	0
3762: Urban Land----- Darlow-----	---	---	---	---	---	---	---	---
	0-5	5.0-15	---	4.5-7.8	0	0	0.0-2.0	0-5
	5-8	5.0-15	---	4.5-7.8	0	0	0.0-2.0	0-5
	8-14	15-25	---	6.6-9.0	0-2	0	2.0-8.0	10-40
	14-20	15-25	---	6.6-9.0	0-2	0	2.0-8.0	15-40
	20-26	15-25	---	6.6-9.0	0-2	0	2.0-8.0	15-40
	26-33	15-30	---	7.9-9.0	0-1	0	4.0-16.0	30-40
	33-44	15-30	---	7.9-9.0	0-1	0	4.0-16.0	30-40
	44-53	10-20	---	7.9-8.4	0-1	0	0.0-4.0	25-35
	53-68	10-15	---	7.9-8.4	0-1	0	0.0-4.0	25-35
	68-80	0.0-10	---	7.4-8.4	0-1	0	0.0-2.0	10-30
Elmer-----	0-6	5.0-12	---	4.5-7.3	0	0	0.0-2.0	0-1
	6-9	5.0-12	---	4.5-7.3	0	0	0.0-2.0	0-1
	9-19	5.0-12	---	4.5-7.3	0	0	0.0-2.0	0-1
	19-26	10-18	---	7.4-9.0	0	0	0.0-2.0	7-20
	26-37	10-18	---	7.4-9.0	0	0	1.0-2.0	7-20
	37-41	15-20	---	7.9-9.0	1-2	0	1.0-4.0	20-30
	41-51	15-20	---	7.9-9.0	1-2	0	1.0-4.0	20-30
	51-61	8.0-15	---	7.4-9.0	0-1	0	1.0-2.0	5-25
	61-72	8.0-15	---	7.4-9.0	0-1	0	1.0-2.0	5-20
	72-80	8.0-15	---	7.4-9.0	0-1	0	0.0-2.0	5-20
3763: Urban Land, Protected----- Imano, Protected	---	---	---	---	---	---	---	---
	0-10	15-25	---	7.4-8.4	1-5	0	0.0-4.0	0-2
	10-25	10-25	---	7.4-8.4	1-5	0	0.0-4.0	0-2
	25-55	1.0-5.0	---	7.4-9.0	1-5	0	0.0-4.0	0-2
	55-80	1.0-5.0	---	7.4-9.0	1-5	0	0.0-4.0	0-2
3764: Urban Land, Protected----- Mahone, Protected-----	---	---	---	---	---	---	---	---
	0-8	1.0-5.0	---	5.1-7.3	0	0	0	0
	8-14	1.0-5.0	---	5.1-7.3	0	0	0	0
	14-20	6.0-10	---	6.1-7.3	0	0	0	0
	20-25	6.0-10	---	6.1-7.3	0	0	0	0
	25-33	6.0-10	---	6.1-7.3	0	0	0	0
	33-39	6.0-10	---	6.1-8.4	0	0	0	0
	39-42	12-21	---	7.4-8.4	0-1	0	0	0
	42-48	12-21	---	7.4-8.4	0-1	0	0	0
	48-54	8.0-16	---	7.4-8.4	0-1	0	0	0
	54-61	8.0-16	---	7.4-8.4	0-1	0	0	0
	61-66	8.0-16	---	7.4-8.4	0-1	0	0	0
	66-71	8.0-16	---	7.4-8.4	0-1	0	0	0
	71-78	0.0-3.0	---	6.6-8.4	0	0	0	0
	78-80	0.0-3.0	---	6.6-8.4	0	0	0	0



CHEMICAL PROPERTIES OF THE SOILS--Continued  
Reno County, Kansas

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Map symbol and soil name	Depth	Cation- exchange capacity	Effective Cation Exchange Capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm		
3765:								
Urban Land-----	---	---	---	---	---	---	---	---
Saltcreek-----	0-5	5.0-10	---	4.5-6.6	0	0	0	0
	5-10	5.0-10	---	4.5-6.6	0	0	0	0
	10-26	10-18	---	6.1-7.3	0	0	0	0
	26-39	10-18	---	6.1-7.3	0	0	0	0
	39-56	24-35	---	6.1-8.4	0-5	0	0	0
	56-66	24-35	---	6.1-8.4	0-5	0	0	0
	66-80	24-35	---	6.1-8.4	0-5	0	0	0
Naron-----	0-7	6.0-10	---	5.6-7.3	0	0	0	0
	7-19	6.0-10	---	5.6-7.3	0	0	0	0
	19-34	12-17	---	5.6-7.8	0	0	0	0
	34-41	12-17	---	5.6-7.8	0	0	0	0
	41-61	4.0-10	---	6.1-8.4	0-5	0	0	0
	61-80	0.0-1.0	---	6.1-8.4	0-1	0	0	0
3766:								
Urban Land,	---	---	---	---	---	---	---	---
Protected-----								
Saxman,	0-4	1.0-5.0	1.0-5.0	4.5-6.0	0	0	0	0
Protected-----								
	4-8	1.0-5.0	1.0-5.0	4.5-6.0	0	0	0	0
	8-13	1.0-5.0	1.0-5.0	4.5-6.0	0	0	0	0
	13-22	1.0-4.0	---	6.6-8.4	0	0	0	0
	22-30	1.0-4.0	---	6.6-8.4	0	0	0	0
	30-37	0.0-2.0	---	6.6-8.4	0	0	0	0
	37-48	0.0-2.0	---	6.6-8.4	0	0	0	0
	48-54	0.0-2.0	---	6.6-8.4	0	0	0	0
	54-80	0.0-0.0	---	6.6-8.4	0	0	0	0
3767:								
Urban Land,	---	---	---	---	---	---	---	---
Protected-----								
Willowbrook,	0-4	5.0-11	---	5.6-8.4	0	0	0	0
Protected-----								
	4-9	5.0-11	---	5.6-8.4	0	0	0	0
	9-13	5.0-11	---	5.6-8.4	0	0	0	0
	13-17	5.0-11	---	5.6-8.4	0	0	0	0
	17-19	3.0-10	---	7.4-8.4	0-5	0	0	0
	19-26	3.0-10	---	7.4-8.4	0-5	0	0	0
	26-45	0.0-3.0	---	7.4-8.4	0	0	0	0
	45-51	0.0-2.0	---	7.4-8.4	0	0	0	0
	51-80	0.0-2.0	---	7.4-8.4	0	0	0	0
3768:								
Urban Land,	---	---	---	---	---	---	---	---
Protected-----								
Yaggy, Protected	0-5	6.0-9.0	---	7.4-8.4	0-3	0	0	0
	5-11	6.0-9.0	---	7.4-8.4	0-3	0	0	0
	11-14	5.0-16	---	7.4-8.4	0-5	0	0	0
	14-24	---	---	7.4-8.4	0	0	0	0
	24-31	---	---	7.4-8.4	0	0	0	0
	31-42	---	---	7.4-8.4	0	0	0	0
	42-53	---	---	7.4-8.4	0	0	0	0
	53-69	---	---	7.4-8.4	0	0	0	0
	69-80	---	---	7.4-8.4	0	0	0	0
3900:								
Warnut-----	0-2	5.0-10	---	5.6-6.5	0	0	0	0
	2-5	11-16	---	6.1-7.3	0	0	0	0
	5-11	11-16	---	6.1-7.3	0	0	0	0
	11-15	8.0-10	---	6.1-7.3	0	0	0	0
	15-22	8.0-10	---	6.1-7.3	0	0	0	0
	22-37	8.0-10	---	6.1-7.3	0	0	0	0
	37-60	2.0-9.0	---	6.1-7.3	0	0	0	0
	60-80	2.0-9.0	---	6.1-7.3	0	0	0	0
3926:								
Water-----	---	---	---	---	---	---	---	---
3966:								
Willowbrook----	0-4	5.0-11	---	5.6-8.4	0	0	0	0
	4-9	5.0-11	---	5.6-8.4	0	0	0	0
	9-13	5.0-11	---	5.6-8.4	0	0	0	0
	13-17	5.0-11	---	5.6-8.4	0	0	0	0
	17-19	3.0-10	---	7.4-8.4	0-5	0	0	0
	19-26	3.0-10	---	7.4-8.4	0-5	0	0	0
	26-45	0.0-3.0	---	7.4-8.4	0	0	0	0
	45-51	0.0-2.0	---	7.4-8.4	0	0	0	0
	51-80	0.0-2.0	---	7.4-8.4	0	0	0	0
4004:								
Yaggy-----	0-5	6.0-9.0	---	7.4-8.4	0-3	0	0	0
	5-11	6.0-9.0	---	7.4-8.4	0-3	0	0	0
	11-14	5.0-16	---	7.4-8.4	0-5	0	0	0
	14-24	---	---	7.4-8.4	0	0	0	0
	24-31	---	---	7.4-8.4	0	0	0	0
	31-42	---	---	7.4-8.4	0	0	0	0
	42-53	---	---	7.4-8.4	0	0	0	0
	53-69	---	---	7.4-8.4	0	0	0	0
	69-80	---	---	7.4-8.4	0	0	0	0



CHEMICAL PROPERTIES OF THE SOILS--Continued  
Reno County, Kansas

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Map symbol and soil name	Depth	Cation- exchange capacity	Effective Cation Exchange Capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm		
4005: Yaggy-----	0-5	6.0-9.0	---	7.4-8.4	0-3	0	0	0
	5-11	6.0-9.0	---	7.4-8.4	0-3	0	0	0
	11-14	5.0-16	---	7.4-8.4	0-5	0	0	0
	14-24	0.0-4.0	---	7.4-8.4	0	0	0	0
	24-31	0.0-4.0	---	7.4-8.4	0	0	0	0
	31-42	0.0-4.0	---	7.4-8.4	0	0	0	0
	42-53	0.0-4.0	---	7.4-8.4	0	0	0	0
	53-69	0.0-4.0	---	7.4-8.4	0	0	0	0
	69-80	0.0-4.0	---	7.4-8.4	0	0	0	0
Saxman-----	0-4	1.0-5.0	1.0-5.0	4.5-6.0	0	0	0	0
	4-8	1.0-5.0	1.0-5.0	4.5-6.0	0	0	0	0
	8-13	1.0-5.0	1.0-5.0	4.5-6.0	0	0	0	0
	13-22	1.0-4.0	---	6.6-8.4	0	0	0	0
	22-30	1.0-4.0	---	6.6-8.4	0	0	0	0
	30-37	0.0-2.0	---	6.6-8.4	0	0	0	0
	37-48	0.0-2.0	---	6.6-8.4	0	0	0	0
	48-54	0.0-2.0	---	6.6-8.4	0	0	0	0
	54-80	0.0-0.0	---	6.6-8.4	0	0	0	0
4110: Zellmont-----	0-8	6.0-10	---	5.6-7.3	0	0	0	0
	8-18	13-18	---	6.1-7.8	0	0	0	0
	18-26	7.0-11	---	6.1-7.8	0-2	0	0	0
	26-32	13-18	---	6.6-8.4	0-2	0	0	0
	32-80	---	---	---	10-20	0	0	0
Poxmash-----	0-5	5.0-15	---	5.6-6.5	0	0	0	0
	5-9	5.0-15	---	5.6-6.5	0	0	0	0
	9-15	5.0-15	---	6.1-7.8	0	0	0	0
	15-20	2.0-10	---	6.1-8.4	0	0	0	0
	20-33	2.0-5.0	---	5.6-8.4	0	0	0	0
	33-48	2.0-5.0	---	5.6-8.4	0	0	0	0
	48-80	---	---	---	---	---	---	---



# WATER FEATURES Reno County, Kansas

The Water Features table gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations. Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

The months in the table indicate the portion of the year in which the feature is most likely to be a concern.

Water table refers to a saturated zone in the soil. The Water Features table indicates, by month, depth to the top (upper limit) and base (lower limit) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table. Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The Water Features table indicates surface water depth and the duration and frequency of ponding. Duration is expressed as very brief if less than 2 days, brief if 2 to 7 days, long if 7 to 30 days, and very long if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. None means that ponding is not probable; rare that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); occasional that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and frequent that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding, the temporary inundation of an area, is caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and frequency are estimated. Duration is expressed as extremely brief if 0.1 hour to 4 hours, very brief if 4 hours to 2 days, brief if 2 to 7 days, long if 7 to 30 days, and very long if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. None means that flooding is not probable; very rare that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); rare that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); occasional that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); frequent that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and very frequent that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.



(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
990: Abbyville-----	C	February	2.0-4.0	>6.0	---	---	---	---	None
		March	2.0-4.0	>6.0	---	---	---	---	None
		April	2.0-4.0	>6.0	---	---	---	---	None
		May	2.0-4.0	>6.0	---	---	---	---	None
		June	2.0-4.0	>6.0	---	---	---	---	None
991: Abbyville, rarely flooded-	C	January	---	---	---	---	---	---	Rare
		February	2.0-4.0	>6.0	---	---	---	---	Rare
		March	2.0-4.0	>6.0	---	---	---	---	Rare
		April	2.0-4.0	>6.0	---	---	---	---	Rare
		May	2.0-4.0	>6.0	---	---	---	---	Rare
		June	2.0-4.0	>6.0	---	---	---	---	Rare
		July	---	---	---	---	---	---	Rare
		August	---	---	---	---	---	---	Rare
		September	---	---	---	---	---	---	Rare
		October	---	---	---	---	---	---	Rare
		November	---	---	---	---	---	---	Rare
		December	---	---	---	---	---	---	Rare
Kisiwa, occasionally flooded-----	D	January	0.0	1.5	0.0-2.0	Brief	Occasional	Long	Occasional
		February	5.4	>6.0	---	---	---	---	---
		March	0.0	1.5	0.0-2.0	Brief	Occasional	Long	Occasional
		April	5.4	>6.0	---	---	---	---	---
		May	0.0	1.5	0.0-2.0	Brief	Occasional	Long	Occasional
		June	5.4	>6.0	---	---	---	---	---
		July	0.0	1.5	---	---	---	---	---
		August	5.4	>6.0	---	---	---	---	---
		September	0.0	1.5	---	---	---	---	---
		October	5.4	>6.0	---	---	---	---	---
		November	0.0	1.5	---	---	---	---	---
		December	5.4	>6.0	---	---	---	---	---
1004: Albion-----	B		---	---	---	---	---	---	---
1011: Albion-----	B		---	---	---	---	---	---	---
Shellabarger-----	B		---	---	---	---	---	---	---
1057: Aquents-----	D	January	0.7	>6.0	1.0-2.0	Long	Occasional	---	None
		February	0.7	>6.0	1.0-2.0	Long	Occasional	---	None
		March	0.7	>6.0	0.7-2.0	Very long	Frequent	---	None
		April	0.7	>6.0	0.7-2.0	Very long	Frequent	---	None
		May	0.7	>6.0	0.7-2.0	Very long	Frequent	---	None
		June	0.7	>6.0	0.7-2.0	Very long	Frequent	---	None
		July	0.7	>6.0	0.7-2.0	Very long	Frequent	---	None
		August	0.7	>6.0	0.7-2.0	Very long	Frequent	---	None
		September	0.7	>6.0	0.7-2.0	Very long	Frequent	---	None
		October	0.7	>6.0	1.0-2.0	Very long	Occasional	---	None
		November	0.7	>6.0	1.0-2.0	Long	Occasional	---	None
		December	0.7	>6.0	1.0-2.0	Long	Occasional	---	None
1070: Avans-----	B		---	---	---	---	---	---	---
1071: Avans-----	B		---	---	---	---	---	---	---
1072: Avans-----	B		---	---	---	---	---	---	---
1191:			---	---	---	---	---	---	---



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Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
Blazefork-----	D	January	4.0	>6.0	---	---	---	---	Rare
		February	4.0	>6.0	---	---	---	---	Rare
		March	4.0	>6.0	---	---	---	---	Rare
		April	4.0	>6.0	---	---	---	---	Rare
		May	4.0	>6.0	---	---	---	---	Rare
		June	---	---	---	---	---	---	Rare
		July	---	---	---	---	---	---	Rare
		August	---	---	---	---	---	---	Rare
		September	---	---	---	---	---	---	Rare
		October	---	---	---	---	---	---	Rare
		November	4.0	>6.0	---	---	---	---	Rare
		December	4.0	>6.0	---	---	---	---	Rare
1192: Blazefork-----	D	January	4.0	>6.0	---	---	---	---	Rare
		February	4.0	>6.0	---	---	---	---	Rare
		March	4.0	>6.0	---	---	---	---	Rare
		April	4.0	>6.0	---	---	---	---	Rare
		May	4.0	>6.0	---	---	---	---	Rare
		June	---	---	---	---	---	---	Rare
		July	---	---	---	---	---	---	Rare
		August	---	---	---	---	---	---	Rare
		September	---	---	---	---	---	---	Rare
		October	---	---	---	---	---	---	Rare
		November	4.0	>6.0	---	---	---	---	Rare
		December	4.0	>6.0	---	---	---	---	Rare
Kaskan-----	B	January	---	---	---	---	---	---	Rare
		February	5.0	>6.0	---	---	---	---	Rare
		March	5.0	>6.0	---	---	---	---	Rare
		April	5.0	>6.0	---	---	---	---	Rare
		May	5.0	>6.0	---	---	---	---	Rare
		June	5.0	>6.0	---	---	---	---	Rare
		July	---	---	---	---	---	---	Rare
		August	---	---	---	---	---	---	Rare
		September	---	---	---	---	---	---	Rare
		October	---	---	---	---	---	---	Rare
		November	---	---	---	---	---	---	Rare
		December	---	---	---	---	---	---	Rare
1200: Buhler-----	D	January	---	---	---	---	---	---	Rare
		February	5.0	>6.0	---	---	---	---	Rare
		March	5.0	>6.0	---	---	---	---	Rare
		April	5.0	>6.0	---	---	---	---	Rare
		May	5.0	>6.0	---	---	---	---	Rare
		June	5.0	>6.0	---	---	---	---	Rare
		July	---	---	---	---	---	---	Rare
		August	---	---	---	---	---	---	Rare
		September	---	---	---	---	---	---	Rare
		October	---	---	---	---	---	---	Rare
		November	---	---	---	---	---	---	Rare
		December	---	---	---	---	---	---	Rare
Blazefork-----	D	January	4.0	>6.0	---	---	---	---	Rare
		February	4.0	>6.0	---	---	---	---	Rare
		March	4.0	>6.0	---	---	---	---	Rare
		April	4.0	>6.0	---	---	---	---	Rare
		May	4.0	>6.0	---	---	---	---	Rare
		June	---	---	---	---	---	---	Rare
		July	---	---	---	---	---	---	Rare
		August	---	---	---	---	---	---	Rare
		September	---	---	---	---	---	---	Rare
		October	---	---	---	---	---	---	Rare
		November	4.0	>6.0	---	---	---	---	Rare
		December	4.0	>6.0	---	---	---	---	Rare
1324: Carway-----	D	January	0.0	2.0	0.3-1.0	Long	Occasional	---	None
		February	0.0	2.0	0.3-1.0	Long	Occasional	---	None
		March	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		April	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		May	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		June	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		July	---	---	0.3-1.0	Long	Occasional	---	None
		August	---	---	0.3-1.0	Brief	Rare	---	None
		September	---	---	0.3-1.0	Brief	Rare	---	None
		October	---	---	0.3-1.0	Long	Occasional	---	None
		November	---	---	0.3-1.0	Long	Occasional	---	None
		December	0.0	2.0	0.3-1.0	Long	Occasional	---	None



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Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
Carbika-----	D		Ft	Ft	Ft				
		January	0.0	2.0	0.3-1.0	Long	Occasional	---	None
		February	0.0	2.0	0.3-1.0	Long	Occasional	---	None
		March	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		April	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		May	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		June	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		July	---	---	0.3-1.0	Long	Occasional	---	None
		August	---	---	0.0-0.5	Brief	Rare	---	None
		September	---	---	0.0-0.5	Brief	Rare	---	None
		October	---	---	0.3-1.0	Long	Occasional	---	None
		November	---	---	0.3-1.0	Long	Occasional	---	None
		December	0.0	2.0	0.3-1.0	Long	Occasional	---	None
1357: Carway-----	D								
		January	0.0	2.0	0.3-1.0	Long	Occasional	---	None
		February	0.0	2.0	0.3-1.0	Long	Occasional	---	None
		March	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		April	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		May	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		June	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		July	---	---	0.3-1.0	Long	Occasional	---	None
		August	---	---	0.3-1.0	Brief	Rare	---	None
		September	---	---	0.3-1.0	Brief	Rare	---	None
		October	---	---	0.3-1.0	Long	Occasional	---	None
		November	---	---	0.3-1.0	Long	Occasional	---	None
		December	0.0	2.0	0.3-1.0	Long	Occasional	---	None
Dillhut-----	B								
		February	1.5	4.0	---	---	---	---	None
		March	1.5	4.0	---	---	---	---	None
		April	1.5	4.0	---	---	---	---	None
		May	1.5	4.0	---	---	---	---	None
Solvay-----	D								
		February	2.0-4.0	>6.0	---	---	---	---	None
		March	2.0-4.0	>6.0	---	---	---	---	None
		April	2.0-4.0	>6.0	---	---	---	---	None
		May	2.0-4.0	>6.0	---	---	---	---	None
1359: Clark-----	B								
			---	---	---	---	---	---	---
Ost-----	B								
			---	---	---	---	---	---	---
1428: Crete-----	C								
			---	---	---	---	---	---	---
1429: Crete-----	C								
			---	---	---	---	---	---	---
1553: Darlow-----	C								
			---	---	---	---	---	---	---
Elmer-----	C								
			---	---	---	---	---	---	---
1554: Dillhut-----	B								
		February	1.5	4.0	---	---	---	---	None
		March	1.5	4.0	---	---	---	---	None
		April	1.5	4.0	---	---	---	---	None
		May	1.5	4.0	---	---	---	---	None
1555: Dillhut-----	B								
			---	---	---	---	---	---	---
Plev-----	B								
		February	0.5	4.0	---	---	---	---	None
		March	0.5	4.0	---	---	---	---	None
		April	0.5	4.0	---	---	---	---	None
		May	0.5	4.0	---	---	---	---	None
1556: Dillhut-----	B								
			---	---	---	---	---	---	---
Solvay-----	D								
		February	2.0-4.0	>6.0	---	---	---	---	None
		March	2.0-4.0	>6.0	---	---	---	---	None
		April	2.0-4.0	>6.0	---	---	---	---	None
		May	2.0-4.0	>6.0	---	---	---	---	None
1725: Farnum-----	B								
			---	---	---	---	---	---	---
Funmar-----	C								
			---	---	---	---	---	---	---
1727: Funmar-----	C								
			---	---	---	---	---	---	---
Taver-----	D								



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Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
1804: Geary-----	B		---	---	---	---	---	---	---
1807: Geary, Moderately Eroded--	B		---	---	---	---	---	---	---
1985: Hayes-----	B		---	---	---	---	---	---	---
1986: Hayes-----	B		---	---	---	---	---	---	---
Solvay-----	D		---	---	---	---	---	---	---
		February	2.0-4.0	>6.0	---	---	---	---	None
		March	2.0-4.0	>6.0	---	---	---	---	None
		April	2.0-4.0	>6.0	---	---	---	---	None
		May	2.0-4.0	>6.0	---	---	---	---	None
1987: Hayes-----	B		---	---	---	---	---	---	---
Turon-----	A		---	---	---	---	---	---	---
2204: Jamash-----	D		---	---	---	---	---	---	---
Piedmont-----	D		---	---	---	---	---	---	---
2205: Jamash-----	D		---	---	---	---	---	---	---
Piedmont-----	D		---	---	---	---	---	---	---
2206: Jamash-----	D		---	---	---	---	---	---	---
Piedmont-----	D		---	---	---	---	---	---	---
2207: Jamash-----	D		---	---	---	---	---	---	---
2381: Kanza-----	D		---	---	---	---	---	---	---
		January	0.0-3.0	>6.0	---	---	---	Very brief	Frequent
		February	0.0-3.0	>6.0	---	---	---	Very brief	Frequent
		March	0.0-3.0	>6.0	---	---	---	Very brief	Frequent
		April	---	---	---	---	---	Very brief	Frequent
		May	---	---	---	---	---	Very brief	Frequent
		June	---	---	---	---	---	Very brief	Frequent
		July	---	---	---	---	---	Very brief	Frequent
		August	---	---	---	---	---	Very brief	Frequent
		September	---	---	---	---	---	Very brief	Frequent
		October	---	---	---	---	---	Very brief	Frequent
		November	---	---	---	---	---	Very brief	Frequent
		December	0.0-3.0	>6.0	---	---	---	Very brief	Frequent
Ninnescah-----	B		---	---	---	---	---	---	None
		February	2.0	>6.0	---	---	---	Long	Occasional
		March	2.0	>6.0	---	---	---	Long	Occasional
		April	2.0	>6.0	---	---	---	Long	Occasional
		May	2.0	>6.0	---	---	---	Long	Occasional
		June	2.0	>6.0	---	---	---	Long	Occasional
		July	---	---	---	---	---	Long	Occasional
		August	---	---	---	---	---	Long	Occasional
		September	---	---	---	---	---	Long	Occasional
		October	---	---	---	---	---	Long	Occasional
2390: Kaskan-----	B		---	---	---	---	---	---	Rare
		January	---	---	---	---	---	---	Rare
		February	5.0	>6.0	---	---	---	---	Rare
		March	5.0	>6.0	---	---	---	---	Rare
		April	5.0	>6.0	---	---	---	---	Rare
		May	5.0	>6.0	---	---	---	---	Rare
		June	5.0	>6.0	---	---	---	---	Rare
		July	---	---	---	---	---	---	Rare
		August	---	---	---	---	---	---	Rare
		September	---	---	---	---	---	---	Rare
		October	---	---	---	---	---	---	Rare
		November	---	---	---	---	---	---	Rare
		December	---	---	---	---	---	---	Rare
2391:			---	---	---	---	---	---	---



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Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
Kaskan-----	B		Ft	Ft	Ft				
		January	---	---	---	---	---	Brief	Frequent
		February	5.0	>6.0	---	---	---	Brief	Frequent
		March	5.0	>6.0	---	---	---	Brief	Frequent
		April	5.0	>6.0	---	---	---	Brief	Frequent
		May	5.0	>6.0	---	---	---	Brief	Frequent
		June	5.0	>6.0	---	---	---	Brief	Frequent
		July	---	---	---	---	---	Brief	Frequent
		August	---	---	---	---	---	Brief	Frequent
		September	---	---	---	---	---	Brief	Frequent
		October	---	---	---	---	---	Brief	Frequent
		November	---	---	---	---	---	Brief	Frequent
		December	---	---	---	---	---	Brief	Frequent
2395: Kisiwa-----	D								
		January	0.0	1.5	0.0-2.0	Long	Occasional	---	None
			5.4	>6.0					
		February	0.0	1.5	0.0-2.0	Long	Occasional	---	None
			5.4	>6.0					
		March	0.0	1.5	0.0-2.0	Long	Occasional	---	None
			5.4	>6.0					
		April	0.0	1.5	0.0-2.0	Long	Occasional	---	None
			5.4	>6.0					
		May	0.0	1.5	0.0-2.0	Long	Occasional	---	None
			5.4	>6.0					
		June	0.0	1.5	---	---	---	---	None
			5.4	>6.0					
		July	5.4	>6.0	---	---	---	---	None
			5.4	>6.0					
		August	5.4	>6.0	---	---	---	---	None
			5.4	>6.0					
		September	0.0	1.5	---	---	---	---	None
			5.4	>6.0					
		October	0.0	1.5	---	---	---	---	None
			5.4	>6.0					
		November	0.0	1.5	---	---	---	---	None
			5.4	>6.0					
		December	0.0	1.5	---	---	---	---	None
			5.4	>6.0					
2509: Ladysmith-----	D								
		April	2.5	3.0	---	---	---	---	None
		May	2.5	3.0	---	---	---	---	None
		June	2.5	3.0	---	---	---	---	None
2556: Langdon-----	A								
			---	---	---	---	---	---	---
2587: Imano-----	C								
		March	2.0-4.0	>6.0	---	---	None	Very brief	Occasional
		April	2.0-4.0	>6.0	---	---	None	Very brief	Occasional
		May	2.0-4.0	>6.0	---	---	None	Very brief	Occasional
		June	2.0-4.0	>6.0	---	---	None	Very brief	Occasional
		July	2.0-4.0	>6.0	---	---	None	Very brief	Occasional
2588: Longford, Moderately Eroded-----	C								
			---	---	---	---	---	---	---
2812: Mahone-----	C								
		January	---	---	---	---	---	---	Rare
		February	5.0	>6.0	---	---	---	---	Rare
		March	5.0	>6.0	---	---	---	---	Rare
		April	5.0	>6.0	---	---	---	---	Rare
		May	5.0	>6.0	---	---	---	---	Rare
		June	5.0	>6.0	---	---	---	---	Rare
		July	---	---	---	---	---	---	Rare
		August	---	---	---	---	---	---	Rare
		September	---	---	---	---	---	---	Rare
		October	---	---	---	---	---	---	Rare
		November	---	---	---	---	---	---	Rare
		December	---	---	---	---	---	---	Rare
2948: Nalim-----	B								
			---	---	---	---	---	---	---
2949: Naron, Moderately Eroded--	B								
			---	---	---	---	---	---	---
2950: Naron, Moderately Eroded--	B								
			---	---	---	---	---	---	---
2951: Nash-----	B								
			---	---	---	---	---	---	---
2952: Nash-----	B								



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Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
Lucien-----	C		---	---	---	---	---	---	---
2953: Nash, Moderately Eroded---	B		---	---	---	---	---	---	---
Lucien-----	C		---	---	---	---	---	---	---
2955: Nickerson-----	B		---	---	---	---	---	---	---
		January	2.0-4.0	>6.0	---	---	---	---	None
		February	2.0-4.0	>6.0	---	---	---	---	None
		March	2.0-4.0	>6.0	---	---	---	---	None
		April	2.0-4.0	>6.0	---	---	---	---	None
		December	2.0-4.0	>6.0	---	---	---	---	None
2956: Nickerson-----	B		---	---	---	---	---	---	---
		January	2.0-4.0	>6.0	---	---	---	---	None
		February	2.0-4.0	>6.0	---	---	---	---	None
		March	2.0-4.0	>6.0	---	---	---	---	None
		April	2.0-4.0	>6.0	---	---	---	---	None
		December	2.0-4.0	>6.0	---	---	---	---	None
2957: Nickerson-----	B		---	---	---	---	---	---	---
		January	2.0-4.0	---	---	---	---	---	None
		February	2.0-4.0	>6.0	---	---	---	---	None
		March	2.0-4.0	>6.0	---	---	---	---	None
		April	2.0-4.0	>6.0	---	---	---	---	None
		December	2.0-4.0	>6.0	---	---	---	---	None
Punkin-----	D		---	---	---	---	---	---	---
2958: Ninnescah-----	B		---	---	---	---	---	---	---
		February	2.0	>6.0	---	---	---	---	None
		March	2.0	>6.0	---	---	---	Long	Occasional
		April	2.0	>6.0	---	---	---	Long	Occasional
		May	2.0	>6.0	---	---	---	Long	Occasional
		June	2.0	>6.0	---	---	---	Long	Occasional
		July	---	---	---	---	---	Long	Occasional
		August	---	---	---	---	---	Long	Occasional
		September	---	---	---	---	---	Long	Occasional
		October	---	---	---	---	---	Long	Occasional
2959: Ninnescah, saline-----	B		---	---	---	---	---	---	---
		February	0.0-2.0	>6.0	---	---	---	---	None
		March	0.0-2.0	>6.0	---	---	---	Long	Occasional
		April	0.0-2.0	>6.0	---	---	---	Long	Occasional
		May	0.0-2.0	>6.0	---	---	---	Long	Occasional
		June	0.0-2.0	>6.0	---	---	---	Long	Occasional
		July	---	---	---	---	---	Long	Occasional
		August	---	---	---	---	---	Long	Occasional
		September	---	---	---	---	---	Long	Occasional
		October	---	---	---	---	---	Long	Occasional
3051: Ost-----	B		---	---	---	---	---	---	---
3052: Ost-----	B		---	---	---	---	---	---	---
Clark-----	B		---	---	---	---	---	---	---
3170: Penalosa-----	C		---	---	---	---	---	---	---
3171: Penalosa-----	C		---	---	---	---	---	---	---
3180: Pratt-----	A		---	---	---	---	---	---	---
3181: Pratt-----	A		---	---	---	---	---	---	---
Turon-----	A		---	---	---	---	---	---	---
3190: Punkin-----	D		---	---	---	---	---	---	---
3191: Punkin-----	D		---	---	---	---	---	---	---
Taver-----	D		---	---	---	---	---	---	---
3403:			---	---	---	---	---	---	---



(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
Sand Pit-----	---		Ft	Ft	Ft				
3469: Smolan-----	C		---	---	---	---	---	---	---
3510: Saltcreek-----	C		---	---	---	---	---	---	---
Funmar-----	C		---	---	---	---	---	---	---
Farnum-----	B		---	---	---	---	---	---	---
3511: Saltcreek-----	C		---	---	---	---	---	---	---
Naron, sandy substratum---	B		---	---	---	---	---	---	---
3512: Saltcreek-----	C		---	---	---	---	---	---	---
Naron-----	B		---	---	---	---	---	---	---
3520: Saxman-----	A		---	---	---	---	---	---	---
		January	---	---	---	---	---	---	Rare
		February	2.0-3.0	>6.0	---	---	---	---	Rare
		March	2.0-3.0	>6.0	---	---	---	---	Rare
		April	2.0-3.0	>6.0	---	---	---	---	Rare
		May	2.0-3.0	>6.0	---	---	---	---	Rare
		June	2.0-3.0	>6.0	---	---	---	---	Rare
		July	---	---	---	---	---	---	Rare
		August	---	---	---	---	---	---	Rare
		September	---	---	---	---	---	---	Rare
		October	---	---	---	---	---	---	Rare
		November	---	---	---	---	---	---	Rare
		December	---	---	---	---	---	---	Rare
3530: Shellabarger, Eroded-----	B		---	---	---	---	---	---	---
Albion-----	B		---	---	---	---	---	---	---
3531: Shellabarger, Moderately Eroded-----	B		---	---	---	---	---	---	---
Nalim-----	B		---	---	---	---	---	---	---
3532: Shellabarger-----	B		---	---	---	---	---	---	---
3533: Shellabarger-----	B		---	---	---	---	---	---	---
3534: Shellabarger-----	B		---	---	---	---	---	---	---
3535: Shellabarger-----	B		---	---	---	---	---	---	---
Nalim-----	B		---	---	---	---	---	---	---
3540: Solvay-----	D		---	---	---	---	---	---	---
		February	2.0-4.0	>6.0	---	---	---	---	None
		March	2.0-4.0	>6.0	---	---	---	---	None
		April	2.0-4.0	>6.0	---	---	---	---	None
		May	2.0-4.0	>6.0	---	---	---	---	None
3550: Spelvin-----	B		---	---	---	---	---	---	---
3639: Taver-----	D		---	---	---	---	---	---	---
3640: Tivin-----	A		---	---	---	---	---	---	---
3641: Tivin-----	A		---	---	---	---	---	---	---
Dillhut-----	B		---	---	---	---	---	---	---
3642:			---	---	---	---	---	---	---



(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
Tivin-----	A	January	5.0-6.7	>6.0	---	---	None	---	None
		February	5.0-6.7	>6.0	---	---	None	---	None
		March	5.0-6.7	>6.0	---	---	None	---	None
		April	5.0-6.7	>6.0	---	---	None	---	None
		May	5.0-6.7	>6.0	---	---	None	---	None
		June	5.0-6.7	>6.0	---	---	None	---	None
		December	5.0-6.7	>6.0	---	---	None	---	None
Willowbrook, occasionally flooded-----	B	February	2.0-4.0	>6.0	---	---	None	---	None
		March	2.0-4.0	>6.0	---	---	None	Brief	Occasional
		April	2.0-4.0	>6.0	---	---	None	Brief	Occasional
		May	2.0-4.0	>6.0	---	---	None	Brief	Occasional
		June	2.0-4.0	>6.0	---	---	None	Brief	Occasional
		July	---	---	---	---	None	Brief	Occasional
		August	---	---	---	---	None	Brief	Occasional
		September	---	---	---	---	None	Brief	Occasional
		October	---	---	---	---	None	Brief	Occasional
3643: Tobin-----	B	March	---	---	---	---	---	Very brief	Occasional
		April	---	---	---	---	---	Very brief	Occasional
		May	---	---	---	---	---	Very brief	Occasional
		June	---	---	---	---	---	Very brief	Occasional
		July	---	---	---	---	---	Very brief	Occasional
		August	---	---	---	---	---	Very brief	Occasional
		September	---	---	---	---	---	Very brief	Occasional
		October	---	---	---	---	---	Very brief	Occasional
		November	---	---	---	---	---	Very brief	Occasional
		December	---	---	---	---	---	Very brief	Occasional
3644: Turon-----	A		---	---	---	---	---	---	---
Carway-----	D	January	0.0	2.0	0.3-1.0	Long	Occasional	---	None
		February	0.0	2.0	0.3-1.0	Long	Occasional	---	None
		March	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		April	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		May	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		June	0.0	2.0	0.3-1.0	Long	Frequent	---	None
		July	---	---	0.3-1.0	Long	Occasional	---	None
		August	---	---	0.3-1.0	Brief	Rare	---	None
		September	---	---	0.3-1.0	Brief	Rare	---	None
		October	---	---	0.3-1.0	Long	Occasional	---	None
		November	---	---	0.3-1.0	Long	Occasional	---	None
		December	0.0	2.0	0.3-1.0	Long	Occasional	---	None
3760: Blazefork, Protected-----	D	January	4.0	>6.0	---	---	---	---	None
		February	4.0	>6.0	---	---	---	---	None
		March	4.0	>6.0	---	---	---	---	None
		April	4.0	>6.0	---	---	---	---	None
		May	4.0	>6.0	---	---	---	---	None
		November	4.0	>6.0	---	---	---	---	None
		December	4.0	>6.0	---	---	---	---	None
Kaskan, Protected-----	B	February	5.0	>6.0	---	---	---	---	None
		March	5.0	>6.0	---	---	---	---	None
		April	5.0	>6.0	---	---	---	---	None
		May	5.0	>6.0	---	---	---	---	None
		June	5.0	>6.0	---	---	---	---	None
3762: Darlow-----	C		---	---	---	---	---	---	---
Elmer-----	C		---	---	---	---	---	---	---
3763: Imano, Protected-----	C	March	2.0-4.0	>6.0	---	---	None	---	None
		April	2.0-4.0	>6.0	---	---	None	---	None
		May	2.0-4.0	>6.0	---	---	None	---	None
		June	2.0-4.0	>6.0	---	---	None	---	None
		July	2.0-4.0	>6.0	---	---	None	---	None
3764: Mahone, Protected-----	C	February	5.0	>6.0	---	---	---	---	None
		March	5.0	>6.0	---	---	---	---	None
		April	5.0	>6.0	---	---	---	---	None
		May	5.0	>6.0	---	---	---	---	None
		June	5.0	>6.0	---	---	---	---	None
3765: Saltcreek-----	C		---	---	---	---	---	---	---



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Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
Naron-----	B		Ft	Ft	Ft				
3766: Saxman, Protected-----	A		---	---	---	---	---	---	---
		February	2.0-3.0	>6.0	---	---	---	---	None
		March	2.0-3.0	>6.0	---	---	---	---	None
		April	2.0-3.0	>6.0	---	---	---	---	None
		May	2.0-3.0	>6.0	---	---	---	---	None
		June	2.0-3.0	>6.0	---	---	---	---	None
3767: Willowbrook, Protected----	B								
		February	2.0-4.0	>6.0	---	---	None	---	None
		March	2.0-4.0	>6.0	---	---	None	---	None
		April	2.0-4.0	>6.0	---	---	None	---	None
		May	2.0-4.0	>6.0	---	---	None	---	None
		June	2.0-4.0	>6.0	---	---	None	---	None
3768: Yaggy, Protected-----	C								
		January	2.0-4.0	>6.0	---	---	---	---	None
		February	2.0-4.0	>6.0	---	---	---	---	None
		March	2.0-4.0	>6.0	---	---	---	---	None
		April	2.0-4.0	>6.0	---	---	---	---	None
		May	2.0-4.0	>6.0	---	---	---	---	None
		December	2.0-4.0	>6.0	---	---	---	---	None
3900: Walnut-----	D								
		January	---	---	0.3-2.0	Long	Occasional	---	None
		February	---	---	0.3-2.0	Long	Occasional	---	None
		March	---	---	0.3-2.0	Long	Frequent	---	None
		April	0.0	>6.0	0.3-2.0	Long	Frequent	---	None
		May	0.0	>6.0	0.3-2.0	Long	Frequent	---	None
		June	0.0	>6.0	0.3-2.0	Long	Frequent	---	None
		July	---	---	0.3-2.0	Long	Occasional	---	None
		August	---	---	0.0-2.0	Brief	Rare	---	None
		September	---	---	0.0-2.0	Brief	Rare	---	None
		October	---	---	0.3-2.0	Long	Occasional	---	None
		November	---	---	0.3-2.0	Long	Occasional	---	None
		December	---	---	0.3-2.0	Long	Occasional	---	None
3926: Water-----	---								
3966: Willowbrook-----	B								
		February	2.0-4.0	>6.0	---	---	None	---	None
		March	2.0-4.0	>6.0	---	---	None	Brief	Occasional
		April	2.0-4.0	>6.0	---	---	None	Brief	Occasional
		May	2.0-4.0	>6.0	---	---	None	Brief	Occasional
		June	2.0-4.0	>6.0	---	---	None	Brief	Occasional
		July	---	---	---	---	None	Brief	Occasional
		August	---	---	---	---	None	Brief	Occasional
		September	---	---	---	---	None	Brief	Occasional
		October	---	---	---	---	None	Brief	Occasional
4004: Yaggy-----	C								
		January	2.0-4.0	>6.0	---	---	---	---	None
		February	2.0-4.0	>6.0	---	---	---	---	None
		March	2.0-4.0	>6.0	---	---	---	Brief	Occasional
		April	2.0-4.0	>6.0	---	---	---	Brief	Occasional
		May	2.0-4.0	>6.0	---	---	---	Brief	Occasional
		June	---	---	---	---	---	Brief	Occasional
		July	---	---	---	---	---	Brief	Occasional
		August	---	---	---	---	---	Brief	Occasional
		September	---	---	---	---	---	Brief	Occasional
		October	---	---	---	---	---	Brief	Occasional
		December	2.0-4.0	>6.0	---	---	---	---	None
4005: Yaggy-----	C								
		January	2.0-4.0	>6.0	---	---	---	---	None
		February	2.0-4.0	>6.0	---	---	---	---	None
		March	2.0-4.0	>6.0	---	---	---	Brief	Occasional
		April	2.0-4.0	>6.0	---	---	---	Brief	Occasional
		May	2.0-4.0	>6.0	---	---	---	Brief	Occasional
		June	---	---	---	---	---	Brief	Occasional
		July	---	---	---	---	---	Brief	Occasional
		August	---	---	---	---	---	Brief	Occasional
		September	---	---	---	---	---	Brief	Occasional
		October	---	---	---	---	---	Brief	Occasional
		December	2.0-4.0	>6.0	---	---	---	---	None



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Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
Saxman-----	A	January	---	---	---	---	---	---	Rare
		February	2.0-3.0	>6.0	---	---	---	---	Rare
		March	2.0-3.0	>6.0	---	---	---	---	Rare
		April	2.0-3.0	>6.0	---	---	---	---	Rare
		May	2.0-3.0	>6.0	---	---	---	---	Rare
		June	2.0-3.0	>6.0	---	---	---	---	Rare
		July	---	---	---	---	---	---	Rare
		August	---	---	---	---	---	---	Rare
		September	---	---	---	---	---	---	Rare
		October	---	---	---	---	---	---	Rare
		November	---	---	---	---	---	---	Rare
		December	---	---	---	---	---	---	Rare
4110: Zellmont-----	B		---	---	---	---	---	---	---
Poxmash-----	B		---	---	---	---	---	---	---



The following table gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A restrictive layer is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. The table indicates the hardness and thickness of the restrictive layer, both of which significantly affect the ease of excavation. Depth to top is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as low, moderate, or high, is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as low, moderate, or high. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.



Map symbol and soil name	Restrictive layer				Potential for Frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated Steel	Concrete
		In	In				
990: Abbyville-----	---	---	---	---	Low	High	Low
991: Abbyville, rarely flooded-	---	---	---	---	Low	High	Low
Kisiwa, occasionally flooded-----	---	---	---	---	Low	High	Low
1004: Albion-----	---	---	---	---	Low	Low	Low
1011: Albion-----	---	---	---	---	Low	Low	Low
Shellabarger----	---	---	---	---	Low	Low	Moderate
1057: Aguents-----	---	---	---	---	---	High	Low
1061: Arents, Earthen Dam-----	---	---	---	---	---	---	---
1062: Arents, Landfill	---	---	---	---	---	---	---
1070: Avans-----	---	---	---	---	Low	Moderate	Moderate
1071: Avans-----	---	---	---	---	Low	Moderate	Moderate
1072: Avans-----	---	---	---	---	Low	Moderate	Moderate
1191: Blazefork-----	---	---	---	---	Low	High	Low
1192: Blazefork-----	---	---	---	---	Low	High	Low
Kaskan-----	---	---	---	---	Low	Moderate	Low
1200: Buhler-----	---	---	---	---	Low	High	Low
Blazefork-----	---	---	---	---	Low	High	Low
1324: Carway-----	---	---	---	---	Low	High	Moderate
Carbika-----	---	---	---	---	Low	Moderate	Low
1357: Carway-----	---	---	---	---	Low	High	Moderate
Dillhut-----	---	---	---	---	Low	Low	Moderate
Solvay-----	---	---	---	---	Low	High	Moderate
1359: Clark-----	---	---	---	---	Low	Moderate	Low
Ost-----	---	---	---	---	Low	Moderate	Low
1428: Crete-----	---	---	---	---	Low	Moderate	Low
1429: Crete-----	---	---	---	---	Moderate	Moderate	Low
1553: Darlow-----	---	---	---	---	Low	High	Low
Elmer-----	---	---	---	---	Low	High	Low
1554: Dillhut-----	---	---	---	---	Low	Low	Moderate
1555: Dillhut-----	---	---	---	---	Low	Low	Moderate
Plev-----	---	---	---	---	Low	High	Moderate
1556: Dillhut-----	---	---	---	---	Low	Low	Moderate
Solvay-----	---	---	---	---	Low	High	Moderate
1725: Farnum-----	---	---	---	---	Low	Moderate	Low
Funmar-----	---	---	---	---	Low	Moderate	Low
1727: Funmar-----	---	---	---	---	Low	Moderate	Low
Taver-----	---	---	---	---	Low	High	Low
1804: Geary-----	---	---	---	---	High	Low	Low
1807: Geary, Moderately Eroded-----	---	---	---	---	High	Low	Low
1985: Hayes-----	---	---	---	---	Low	Moderate	Low
1986: Hayes-----	---	---	---	---	Low	Moderate	Low
Solvay-----	---	---	---	---	Low	High	Moderate
1987: Hayes-----	---	---	---	---	Low	Moderate	Low
Turon-----	---	---	---	---	Low	Low	Moderate
2204: Jamash-----	12-15	Bedrock (paralithic)	---	Moderately cemented	None	High	Low
Piedmont-----	32-36	Bedrock (paralithic)	---	Moderately cemented	None	High	Low



Map symbol and soil name	Restrictive layer				Potential for Frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated Steel	Concrete
2205:		In	In				
Jamash-----	12-15	Bedrock (paralithic)	---	Moderately cemented	None	High	Low
Piedmont-----	32-36	Bedrock (paralithic)	---	Moderately cemented	None	High	Low
2206:							
Jamash-----	12-15	Bedrock (paralithic)	---	Moderately cemented	None	High	Low
Piedmont-----	32-36	Bedrock (paralithic)	---	Moderately cemented	None	High	Low
2207:							
Jamash-----	12-15	Bedrock (paralithic)	---	Moderately cemented	None	High	Low
2381:							
Kanza-----	---	---	---	---	Low	High	Moderate
Ninnescah-----	---	---	---	---	Low	High	Low
2390:							
Kaskan-----	---	---	---	---	Low	Moderate	Low
2391:							
Kaskan-----	---	---	---	---	Low	High	Moderate
2395:							
Kisiwa-----	---	---	---	---	Low	High	Low
2509:							
Ladysmith-----	---	---	---	---	Moderate	High	Low
2556:							
Langdon-----	---	---	---	---	Low	Low	Low
2587:							
Imano-----	---	---	---	---	Low	High	Low
2588:							
Longford, Moderately Eroded-----	---	---	---	---	Moderate	High	Low
2812:							
Mahone-----	---	---	---	---	Low	Low	Low
2948:							
Nalim-----	---	---	---	---	Low	Moderate	Low
2949:							
Naron, Moderately Eroded-----	---	---	---	---	Low	Low	Low
2950:							
Naron, Moderately Eroded-----	---	---	---	---	Low	Low	Low
2951:							
Nash-----	25-32	Bedrock (paralithic)	---	---	None	Low	Low
2952:							
Nash-----	25-32	Bedrock (paralithic)	---	---	None	Low	Low
Lucien-----	12-16	Bedrock (paralithic)	---	---	None	Moderate	Low
2953:							
Nash, Moderately Eroded-----	25-32	Bedrock (paralithic)	---	---	None	Low	Low
Lucien-----	12-16	Bedrock (paralithic)	---	---	None	Moderate	Low
2955:							
Nickerson-----	---	---	---	---	Low	Moderate	Low
2956:							
Nickerson-----	---	---	---	---	Low	Moderate	Low
2957:							
Nickerson-----	---	---	---	---	Low	Moderate	Low
Punkin-----	---	---	---	---	Low	High	Low
2958:							
Ninnescah-----	---	---	---	---	Low	High	Low
2959:							
Ninnescah, saline-----	---	---	---	---	Low	High	Low
3051:							
Ost-----	---	---	---	---	Low	Moderate	Low
3052:							
Ost-----	---	---	---	---	Low	Moderate	Low
Clark-----	---	---	---	---	Low	Moderate	Low
3170:							
Penalosa-----	---	---	---	---	Low	High	Low
3171:							
Penalosa-----	---	---	---	---	Low	High	Low
3180:							
Pratt-----	---	---	---	---	Low	Low	Moderate
3181:							
Pratt-----	---	---	---	---	Low	Low	Moderate
Turon-----	---	---	---	---	Low	Low	Moderate
3190:							
Punkin-----	---	---	---	---	Low	High	Low



Map symbol and soil name	Restrictive layer				Potential for Frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated Steel	Concrete
		In	In				
3191:							
Punkin-----	---	---	---	---	Low	High	Low
Taver-----	---	---	---	---	Low	High	Low
3403:							
Sand Pit-----	---	---	---	---	---	---	---
3469:							
Smolan-----	---	---	---	---	Moderate	Moderate	Low
3510:							
Saltcreek-----	---	---	---	---	Low	Moderate	Low
Funmar-----	---	---	---	---	Low	Moderate	Low
Farnum-----	---	---	---	---	Low	Moderate	Low
3511:							
Saltcreek-----	---	---	---	---	Low	Moderate	Low
Naron, sandy substratum-----	---	---	---	---	Low	Low	Low
3512:							
Saltcreek-----	---	---	---	---	Low	Moderate	Low
Naron-----	---	---	---	---	Low	Low	Low
3520:							
Saxman-----	---	---	---	---	Low	Low	High
3530:							
Shellabarger, Eroded-----	---	---	---	---	Low	Low	Moderate
Albion-----	---	---	---	---	Low	Low	Low
3531:							
Shellabarger, Moderately Eroded-----	---	---	---	---	Low	Low	Moderate
Nalim-----	---	---	---	---	Low	Moderate	Low
3532:							
Shellabarger----	---	---	---	---	Low	Low	Moderate
3533:							
Shellabarger----	---	---	---	---	Low	Low	Moderate
3534:							
Shellabarger----	---	---	---	---	Low	Low	Moderate
3535:							
Shellabarger----	---	---	---	---	Low	Low	Moderate
Nalim-----	---	---	---	---	Low	Moderate	Low
3540:							
Solvay-----	---	---	---	---	Low	High	Moderate
3550:							
Spelvin-----	---	---	---	---	Low	Low	Moderate
3639:							
Taver-----	---	---	---	---	Low	High	Low
3640:							
Tivin-----	---	---	---	---	Low	Low	Low
3641:							
Tivin-----	---	---	---	---	Low	Low	Low
Dillhut-----	---	---	---	---	Low	Low	Moderate
3642:							
Tivin-----	---	---	---	---	Low	Low	Low
Willowbrook, occasionally flooded-----	---	---	---	---	Low	Moderate	Moderate
3643:							
Tobin-----	---	---	---	---	Moderate	Low	Low
3644:							
Turon-----	---	---	---	---	Low	Low	Moderate
Carway-----	---	---	---	---	Low	High	Moderate
3760:							
Urban Land, Protected-----	---	---	---	---	---	---	---
Blazefork, Protected-----	---	---	---	---	Low	High	Low
Kaskan, Protected-----	---	---	---	---	Low	Moderate	Low
3762:							
Urban Land-----	---	---	---	---	---	---	---
Darlow-----	---	---	---	---	Low	High	Low
Elmer-----	---	---	---	---	Low	High	Low
3763:							
Urban Land, Protected-----	---	---	---	---	---	---	---
Imano, Protected	---	---	---	---	Low	High	Low
3764:							
Urban Land, Protected-----	---	---	---	---	---	---	---
Mahone, Protected-----	---	---	---	---	Low	Low	Low
3765:							
Urban Land-----	---	---	---	---	---	---	---
Saltcreek-----	---	---	---	---	Low	Moderate	Low
Naron-----	---	---	---	---	Low	Low	Low



Map symbol and soil name	Restrictive layer				Potential for Frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated Steel	Concrete
3766:		In	In				
Urban Land, Protected-----	---	---	---	---	---	---	---
Saxman, Protected-----	---	---	---	---	Low	Low	High
3767:							
Urban Land, Protected-----	---	---	---	---	---	---	---
Willowbrook, Protected-----	---	---	---	---	Low	Moderate	Moderate
3768:							
Urban Land, Protected-----	---	---	---	---	---	---	---
Yaggy, Protected	---	---	---	---	Low	High	Low
3900:							
Warnut-----	---	---	---	---	Low	High	Moderate
3926:							
Water-----	---	---	---	---	Low	---	---
3966:							
Willowbrook-----	---	---	---	---	Low	Moderate	Moderate
4004:							
Yaggy-----	---	---	---	---	Low	High	Low
4005:							
Yaggy-----	---	---	---	---	Low	High	Low
Saxman-----	---	---	---	---	Low	Low	High
4110:							
Zellmont-----	20-39	Bedrock (paralithic)	---	Moderately cemented	Low	Low	Moderate
Poxmash-----	48-53	Bedrock (paralithic)	---	---	Low	Low	Low



WATER MANAGEMENT  
Reno County, Kansas

The soils of the survey area are rated in the Water Management table according to limitations that affect their suitability for water management. Soils are rated for pond reservoir areas, drainage, irrigation, terraces and diversions, and grassed waterways. Restrictive features that affect each soil for the specified use is also provided in the table.

The ratings in the table are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Moderately limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Limited indicates that the soil has one or more features that are significant limitations for the specified use. The limitations can be overcome, but generally require special design, soil reclamation, or installation procedures that may result in additional expense. Fair performance and moderate to high maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Limitation class terms, such as very limited or limited, etc., limitation ratings, and numerical ratings are shown for each soil feature listed. As many as three soil features may be listed for each soil component if applicable. The overall limitation rating for the soil component is based on the most severe limitation.

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects traffic ability.

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

Drainage is the removal of excess surface and subsurface water from the soil. How easily and effectively the soil is drained depends on the depth to bedrock, to a cemented pan, or to other layers that affect the rate of water movement; permeability; depth to a high water table or depth of standing water if the soil is subject to ponding; slope; susceptibility to flooding; subsidence of organic layers; and the potential for frost action. Excavating and grading and the stability of ditch banks are affected by depth to bedrock or to a cemented pan, large stones, slope, and the hazard of cutbanks caving. The productivity of the soil after drainage is adversely affected by extreme acidity or by toxic substances in the root zone, such as salts, sodium, and sulfur. Availability of drainage outlets is not considered in the ratings.

Irrigation is the controlled application of water to supplement rainfall and support plant growth. The design and management of an irrigation system are affected by depth to the water table, the need for drainage, flooding, available water capacity, intake rate, permeability, erosion hazard, and slope. The construction of a system is affected by large stones and depth to bedrock or to a cemented pan. The performance of a system is affected by the depth of the root zone, the amount of salts or sodium, and soil reaction.

Terraces and diversions are embankments or a combination of channels and ridges constructed across a slope to control erosion and conserve moisture by intercepting runoff. Slope, wetness, large stones, and depth to bedrock or to a cemented pan affect the construction of terraces and diversions. A restricted rooting depth, a very limited hazard of wind erosion or water erosion, an excessively coarse texture, and restricted permeability adversely affect maintenance.

Grassed waterways are natural or constructed channels, generally broad and shallow, which conduct surface water to outlets at a non-erosive velocity. Large stones, wetness, slope, and depth to bedrock or to a cemented pan affect the construction of grassed waterways. A hazard of wind erosion, low available water capacity, restricted rooting depth, toxic substances such as salts and sodium, and restricted permeability adversely affect the growth and maintenance of the grass after construction.



WATER MANAGEMENT--Continued  
Reno County, Kansas

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
990: Abbyville-----	Limitation: excess sodium	Limitation: excess sodium excess salt wetness	Limitation: wetness	Limitation: excess sodium
991: Abbyville, rarely flooded-	Limitation: excess sodium	Limitation: excess sodium excess salt wetness	Limitation: wetness	Limitation: excess sodium
Kisiwa, occasionally flooded-----	Limitation: excess sodium percs slowly ponding	Limitation: excess sodium percs slowly ponding	Limitation: erodes easily percs slowly ponding	Limitation: erodes easily excess sodium wetness
1004: Albion-----	Limitation: deep to water	Limitation: soil blowing	Limitation: too sandy soil blowing	Favorable
1011: Albion-----	Limitation: deep to water	Limitation: soil blowing	Limitation: too sandy soil blowing	Favorable
Shellabarger----	Limitation: deep to water	Favorable	Limitation: soil blowing	Favorable
1057: Aquents-----	Limitation: flooding	Limitation: flooding wetness soil blowing	Limitation: wetness soil blowing	Limitation: wetness
1061: Arents, Earthen Dam-----	---	---	---	---
1062: Arents, Landfill	---	---	---	---
1070: Avans-----	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
1071: Avans-----	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
1072: Avans-----	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
1191: Blazefork-----	Limitation: deep to water	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly
1192: Blazefork-----	Limitation: deep to water	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly
Kaskan-----	Limitation: deep to water	Favorable	Limitation: erodes easily too sandy	Limitation: erodes easily
1200: Buhler-----	Limitation: excess sodium percs slowly	Limitation: percs slowly wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily excess sodium percs slowly
Blazefork-----	Limitation: deep to water	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly
1324: Carway-----	Limitation: wetness percs slowly	Limitation: wetness soil blowing	Limitation: erodes easily wetness soil blowing	Limitation: erodes easily percs slowly wetness
Carbika-----	Limitation: percs slowly ponding	Limitation: percs slowly soil blowing ponding	Limitation: erodes easily soil blowing ponding	Limitation: erodes easily percs slowly wetness
1357: Carway-----	Limitation: percs slowly	Limitation: wetness soil blowing	Limitation: erodes easily wetness soil blowing	Limitation: erodes easily percs slowly wetness
Dillhut-----	Limitation: cutbanks cave	Limitation: wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: droughty



WATER MANAGEMENT--Continued  
Reno County, Kansas

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
Solvay-----	Favorable	Limitation: wetness soil blowing	Limitation: wetness soil blowing	Favorable
1359: Clark-----	Limitation: deep to water	Favorable	Favorable	Favorable
Ost-----	Limitation: deep to water	Favorable	Favorable	Favorable
1428: Crete-----	Limitation: deep to water	Limitation: erodes easily percs slowly	Limitation: erodes easily	Limitation: erodes easily percs slowly
1429: Crete-----	Limitation: deep to water	Limitation: erodes easily percs slowly	Limitation: erodes easily	Limitation: erodes easily percs slowly
1553: Darlow-----	Limitation: deep to water	Limitation: excess sodium excess salt percs slowly	Limitation: percs slowly	Limitation: excess sodium percs slowly
Elmer-----	Limitation: deep to water	Limitation: excess sodium soil blowing	Limitation: erodes easily soil blowing	Limitation: erodes easily excess sodium
1554: Dillhut-----	Limitation: cutbanks cave	Limitation: wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: droughty
1555: Dillhut-----	Favorable	Limitation: wetness droughty	Limitation: wetness soil blowing	Limitation: droughty
Plev-----	Limitation: cutbanks cave	Limitation: fast intake wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: wetness droughty
1556: Dillhut-----	Favorable	Limitation: wetness droughty	Limitation: wetness soil blowing	Limitation: droughty
Solvay-----	Favorable	Limitation: wetness soil blowing	Limitation: wetness soil blowing	Favorable
1725: Farnum-----	Limitation: deep to water	Favorable	Favorable	Favorable
Funmar-----	Limitation: deep to water	Limitation: percs slowly	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly
1727: Funmar-----	Limitation: deep to water	Limitation: percs slowly	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly
Taver-----	Limitation: deep to water	Limitation: percs slowly	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly
1804: Geary-----	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
1807: Geary, Moderately Eroded-----	Limitation:  deep to water	Limitation:  slope	Limitation:  erodes easily	Limitation:  erodes easily
1985: Hayes-----	Limitation: deep to water	Limitation: fast intake soil blowing	Limitation: soil blowing	Favorable
1986: Hayes-----	Limitation: deep to water	Limitation: fast intake soil blowing	Limitation: soil blowing	Favorable
Solvay-----	Favorable	Limitation: wetness soil blowing	Limitation: wetness soil blowing	Favorable
1987: Hayes-----	Limitation: deep to water	Limitation: fast intake soil blowing	Limitation: soil blowing	Favorable
Turon-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty



WATER MANAGEMENT--Continued  
Reno County, Kansas

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
2204: Jamash-----	Limitation: deep to water	Limitation: percs slowly slope depth to rock	Limitation: erodes easily percs slowly depth to rock	Limitation: erodes easily rooting depth depth to rock
Piedmont-----	Limitation: deep to water	Limitation: percs slowly depth to rock	Limitation: erodes easily percs slowly depth to rock	Limitation: erodes easily rooting depth depth to rock
2205: Jamash-----	Limitation: deep to water	Limitation: percs slowly slope depth to rock	Limitation: erodes easily percs slowly depth to rock	Limitation: erodes easily rooting depth depth to rock
Piedmont-----	Limitation: deep to water	Limitation: percs slowly depth to rock	Limitation: erodes easily percs slowly depth to rock	Limitation: erodes easily rooting depth depth to rock
2206: Jamash-----	Limitation: deep to water	Limitation: percs slowly slope depth to rock	Limitation: erodes easily percs slowly depth to rock	Limitation: erodes easily rooting depth depth to rock
Piedmont-----	Limitation: deep to water	Limitation: percs slowly depth to rock	Limitation: erodes easily percs slowly depth to rock	Limitation: erodes easily rooting depth depth to rock
2207: Jamash-----	Limitation: deep to water	Limitation: percs slowly slope depth to rock	Limitation: erodes easily percs slowly depth to rock	Limitation: erodes easily rooting depth depth to rock
2381: Kanza-----	Limitation: flooding cutbanks cave	Limitation: wetness droughty	Limitation: too sandy wetness	Limitation: wetness droughty
Ninnescah-----	Limitation: flooding cutbanks cave	Limitation: flooding wetness soil blowing	Limitation: too sandy wetness soil blowing	Limitation: wetness
2390: Kaskan-----	Limitation: deep to water	Favorable	Limitation: erodes easily too sandy	Limitation: erodes easily
2391: Kaskan-----	Limitation: deep to water	Limitation: erodes easily flooding	Limitation: erodes easily	Limitation: erodes easily
2395: Kisiwa-----	Limitation: excess sodium percs slowly ponding	Limitation: excess sodium percs slowly ponding	Limitation: erodes easily percs slowly ponding	Limitation: erodes easily excess sodium wetness
2509: Ladysmith-----	Limitation: percs slowly	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly
2556: Langdon-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty
2587: Imano-----	Limitation: flooding cutbanks cave	Limitation: flooding wetness	Limitation: too sandy wetness	Favorable
2588: Longford, Moderately Eroded-----	Limitation:  deep to water	Limitation:  percs slowly slope	Limitation:  erodes easily percs slowly	Limitation:  erodes easily percs slowly
2812: Mahone-----	Limitation: deep to water	Limitation: fast intake soil blowing	Limitation: soil blowing	Favorable
2948: Nalim-----	Limitation: deep to water	Favorable	Favorable	Favorable
2949: Naron, Moderately Eroded-----	Limitation:  deep to water	Favorable	Limitation:  soil blowing	Favorable



WATER MANAGEMENT--Continued  
Reno County, Kansas

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
2950: Naron, Moderately Eroded-----	Limitation: deep to water	Favorable	Limitation: soil blowing	Favorable
2951: Nash-----	Limitation: deep to water	Limitation: erodes easily depth to rock	Limitation: erodes easily depth to rock	Limitation: erodes easily depth to rock
2952: Nash-----	Limitation: deep to water	Limitation: erodes easily depth to rock	Limitation: erodes easily depth to rock	Limitation: erodes easily depth to rock
Lucien-----	Limitation: deep to water	Limitation: erodes easily slope depth to rock	Limitation: erodes easily depth to rock	Limitation: erodes easily depth to rock
2953: Nash, Moderately Eroded-----	Limitation: deep to water	Limitation: erodes easily depth to rock	Limitation: erodes easily depth to rock	Limitation: erodes easily depth to rock
Lucien-----	Limitation: deep to water	Limitation: erodes easily slope depth to rock	Limitation: erodes easily depth to rock	Limitation: erodes easily depth to rock
2955: Nickerson-----	Limitation: cutbanks cave	Limitation: fast intake wetness soil blowing	Limitation: too sandy wetness soil blowing	Favorable
2956: Nickerson-----	Limitation: cutbanks cave	Limitation: fast intake wetness soil blowing	Limitation: too sandy wetness soil blowing	Favorable
2957: Nickerson-----	Limitation: cutbanks cave	Limitation: fast intake wetness soil blowing	Limitation: too sandy wetness soil blowing	Favorable
Punkin-----	Limitation: deep to water	Limitation: excess sodium percs slowly soil blowing	Limitation: percs slowly soil blowing	Limitation: excess sodium percs slowly
2958: Ninnescah-----	Limitation: flooding cutbanks cave	Limitation: flooding wetness soil blowing	Limitation: too sandy wetness soil blowing	Limitation: wetness
2959: Ninnescah, saline-----	Limitation: flooding cutbanks cave	Limitation: flooding wetness soil blowing	Limitation: too sandy wetness soil blowing	Limitation: excess salt wetness
3051: Ost-----	Limitation: deep to water	Favorable	Favorable	Favorable
3052: Ost-----	Limitation: deep to water	Favorable	Favorable	Favorable
Clark-----	Limitation: deep to water	Favorable	Favorable	Favorable
3170: Penalosa-----	Limitation: deep to water	Limitation: percs slowly	Limitation: erodes easily	Limitation: erodes easily percs slowly
3171: Penalosa-----	Limitation: deep to water	Limitation: percs slowly	Limitation: erodes easily	Limitation: erodes easily percs slowly
3180: Pratt-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty
3181: Pratt-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty
Turon-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty



WATER MANAGEMENT--Continued  
Reno County, Kansas

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
3190: Punkin-----	Limitation: deep to water	Limitation: excess sodium percs slowly	Favorable	Limitation: excess sodium percs slowly
3191: Punkin-----	Limitation: deep to water	Limitation: excess sodium percs slowly	Favorable	Limitation: excess sodium percs slowly
Taver-----	Limitation: deep to water	Limitation: percs slowly	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly
3403: Sand Pit-----	---	---	---	---
3469: Smolan-----	Limitation: deep to water	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly
3510: Saltcreek-----	Limitation: deep to water	Limitation: soil blowing	Limitation: erodes easily percs slowly soil blowing	Limitation: erodes easily percs slowly
Funmar-----	Limitation: deep to water	Limitation: percs slowly	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly
Farnum-----	Limitation: deep to water	Favorable	Favorable	Favorable
3511: Saltcreek-----	Limitation: deep to water	Limitation: soil blowing	Limitation: erodes easily percs slowly soil blowing	Limitation: erodes easily percs slowly
Naron, sandy substratum-----	Limitation: deep to water	Limitation: soil blowing	Limitation: soil blowing	Favorable
3512: Saltcreek-----	Limitation: deep to water	Limitation: soil blowing	Limitation: erodes easily percs slowly soil blowing	Limitation: erodes easily percs slowly
Naron-----	Limitation: deep to water	Favorable	Limitation: soil blowing	Favorable
3520: Saxman-----	Limitation: cutbanks cave	Limitation: fast intake wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: droughty
3530: Shellabarger, Eroded-----	Limitation: deep to water	Favorable	Limitation: soil blowing	Favorable
Albion-----	Limitation: deep to water	Limitation: soil blowing	Limitation: too sandy soil blowing	Favorable
3531: Shellabarger, Moderately Eroded-----	Limitation: deep to water	Favorable	Limitation: soil blowing	Favorable
Nalim-----	Limitation: deep to water	Favorable	Favorable	Favorable
3532: Shellabarger----	Limitation: deep to water	Favorable	Limitation: soil blowing	Favorable
3533: Shellabarger----	Limitation: deep to water	Favorable	Limitation: soil blowing	Favorable
3534: Shellabarger----	Limitation: deep to water	Favorable	Limitation: soil blowing	Favorable
3535: Shellabarger----	Limitation: deep to water	Favorable	Limitation: soil blowing	Favorable
Nalim-----	Limitation: deep to water	Favorable	Favorable	Favorable
3540: Solvay-----	Favorable	Limitation: wetness soil blowing	Limitation: wetness soil blowing	Favorable
3550: Spelvin-----	Limitation: deep to water	Limitation: fast intake soil blowing	Limitation: soil blowing	Favorable



WATER MANAGEMENT--Continued  
Reno County, Kansas

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
3639: Taver-----	Limitation: deep to water	Limitation: percs slowly	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly
3640: Tivin-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
3641: Tivin-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
Dillhut-----	Favorable	Limitation: wetness droughty	Limitation: wetness soil blowing	Limitation: droughty
3642: Tivin-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty
Willowbrook, occasionally flooded-----	Limitation:  flooding cutbanks cave	Limitation:  flooding wetness soil blowing	Limitation:  too sandy wetness soil blowing	Favorable
3643: Tobin-----	Limitation: deep to water	Limitation: flooding	Limitation: erodes easily	Limitation: erodes easily
3644: Turon-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty
Carway-----	Limitation: percs slowly	Limitation: wetness soil blowing	Limitation: erodes easily wetness soil blowing	Limitation: erodes easily percs slowly wetness
3760: Urban Land, Protected-----	---	---	---	---
Blazefork, Protected-----	Limitation:  deep to water	Limitation:  erodes easily percs slowly	Limitation:  erodes easily percs slowly	Limitation:  erodes easily percs slowly
Kaskan, Protected-----	Limitation:  deep to water	Favorable	Limitation:  erodes easily too sandy	Limitation:  erodes easily
3762: Urban Land-----	---	---	---	---
Darlow-----	Limitation: deep to water	Limitation: excess sodium excess salt percs slowly	Limitation: percs slowly	Limitation: excess sodium percs slowly
Elmer-----	Limitation: deep to water	Limitation: excess sodium soil blowing	Limitation: erodes easily soil blowing	Limitation: erodes easily excess sodium
3763: Urban Land, Protected-----	---	---	---	---
Imano, Protected	Limitation: cutbanks cave	Limitation: wetness	Limitation: too sandy wetness	Favorable
3764: Urban Land, Protected-----	---	---	---	---
Mahone, Protected-----	Limitation:  deep to water	Limitation:  fast intake soil blowing	Limitation:  soil blowing	Favorable
3765: Urban Land-----	---	---	---	---
Saltcreek-----	Limitation: deep to water	Limitation: soil blowing	Limitation: erodes easily percs slowly soil blowing	Limitation: erodes easily percs slowly
Naron-----	Limitation: deep to water	Limitation: soil blowing	Limitation: soil blowing	Favorable
3766: Urban Land, Protected-----	---	---	---	---



WATER MANAGEMENT--Continued  
Reno County, Kansas

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
Saxman, Protected-----	Limitation: cutbanks cave	Limitation: fast intake wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: droughty
3767: Urban Land, Protected----- Willowbrook, Protected-----	--- Limitation: flooding cutbanks cave	--- Limitation: flooding wetness soil blowing	--- Limitation: too sandy wetness soil blowing	--- Favorable
3768: Urban Land, Protected----- Yaggy, Protected	--- Limitation: flooding cutbanks cave	--- Limitation: wetness soil blowing droughty	--- Limitation: too sandy wetness soil blowing	--- Limitation: droughty
3900: Warnut-----	Limitation: ponding cutbanks cave	Limitation: soil blowing ponding	Limitation: too sandy soil blowing ponding	Limitation: wetness
3926: Water----- 3966: Willowbrook-----	--- Limitation: flooding cutbanks cave	--- Limitation: flooding wetness soil blowing	--- Limitation: too sandy wetness soil blowing	--- Favorable
4004: Yaggy-----	Limitation: wetness cutbanks cave	Limitation: soil blowing droughty	Limitation: too sandy wetness soil blowing	Limitation: droughty
4005: Yaggy-----	Limitation: flooding cutbanks cave	Limitation: wetness soil blowing droughty	Limitation: too sandy wetness soil blowing	Limitation: droughty
Saxman-----	Limitation: cutbanks cave	Limitation: fast intake wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: droughty
4110: Zellmont-----	Limitation: deep to water	Limitation: soil blowing	Limitation: too sandy soil blowing	Favorable
Poxmash-----	Limitation: deep to water	Limitation: soil blowing	Limitation: too sandy soil blowing	Favorable



WATER MANAGEMENT--Continued  
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Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
990: Abbyville-----	95	Not limited		Very limited Piping Depth to saturated zone Seepage	1.00 0.43 0.04	Very limited Slow refill Deep to water Cutbanks cave Salty water	1.00 0.25 0.10 0.01
991: Abbyville, rarely flooded-----	45	Not limited		Very limited  Piping Depth to saturated zone Seepage	 1.00 0.43 0.04	Very limited  Slow refill Deep to water Cutbanks cave Salty water	 1.00 0.25 0.10 0.01
Kisiwa, occasionally flooded-----	40	Very limited  Seepage	  1.00	Very limited  Ponding Depth to saturated zone Seepage Piping	  1.00 1.00 1.00 1.00	Very limited  Deep to water	  1.00
1004: Albion-----	90	Very limited Seepage	1.00	Somewhat limited Seepage	0.99	Very limited Deep to water	1.00
1011: Albion-----	70	Very limited Seepage	1.00	Somewhat limited Seepage	0.90	Very limited Deep to water	1.00
Shellabarger-----	30	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.88	Very limited Deep to water	1.00
1057: Aguents-----	100	Very limited Seepage	1.00	Very limited Ponding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Cutbanks cave	1.00
1061: Arents, Earthen Dam-	100	Not rated		Not rated		Not rated	
1062: Arents, Landfill----	100	Very limited Seepage Slope	1.00 0.50	Very limited Hard to pack	1.00	Very limited Deep to water	1.00
1070: Avans-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.74	Very limited Deep to water	1.00
1071: Avans-----	85	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.74	Very limited Deep to water	1.00
1072: Avans-----	85	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.74	Very limited Deep to water	1.00
1191: Blazefork-----	90	Somewhat limited Seepage	0.05	Not limited		Somewhat limited Slow refill Deep to water Cutbanks cave	0.95 0.81 0.10
1192: Blazefork-----	60	Somewhat limited Seepage	0.05	Not limited		Somewhat limited Slow refill Deep to water Cutbanks cave	0.95 0.81 0.10
Kaskan-----	40	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Deep to water	1.00



WATER MANAGEMENT--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1200: Buhler-----	65	Somewhat limited Seepage	0.70	Very limited Piping Seepage	1.00 0.09	Very limited Deep to water	1.00
Blazefork-----	30	Somewhat limited Seepage	0.05	Not limited		Somewhat limited Slow refill Deep to water Cutbanks cave	0.95 0.81 0.10
1324: Carway-----	50	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Deep to water	1.00
Carbika-----	30	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.40	Very limited Deep to water	1.00
1357: Carway-----	40	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Deep to water	1.00
Dillhut-----	30	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage Piping	1.00 1.00 0.53	Very limited Deep to water	1.00
Solvay-----	30	Very limited Seepage	1.00	Somewhat limited Seepage Depth to saturated zone	0.56 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
1359: Clark-----	70	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.52	Very limited Deep to water	1.00
Ost-----	30	Somewhat limited Seepage	0.05	Somewhat limited Piping	0.82	Very limited Deep to water	1.00
1428: Crete-----	100	Somewhat limited Seepage	0.57	Not limited		Very limited Deep to water	1.00
1429: Crete-----	100	Somewhat limited Seepage	0.57	Not limited		Very limited Deep to water	1.00
1553: Darlow-----	70	Somewhat limited Seepage	0.70	Very limited Piping Salinity Seepage	1.00 0.12 0.12	Very limited Deep to water	1.00
Elmer-----	20	Very limited Seepage	1.00	Very limited Piping Seepage	1.00 0.10	Very limited Deep to water	1.00
1554: Dillhut-----	70	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage Piping	1.00 1.00 0.53	Very limited Deep to water	1.00
1555: Dillhut-----	35	Very limited Seepage	1.00	Somewhat limited Seepage	0.13	Very limited Deep to water	1.00
Plev-----	35	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Deep to water	1.00



WATER MANAGEMENT--Continued  
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Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1556: Dillhut-----	30	Very limited Seepage	1.00	Somewhat limited Seepage	0.13	Very limited Deep to water	1.00
Solvay-----	30	Very limited Seepage	1.00	Somewhat limited Seepage Depth to saturated zone	0.56 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
1725: Farnum-----	40	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.01	Very limited Deep to water	1.00
Funmar-----	40	Somewhat limited Seepage	0.05	Not limited		Very limited Deep to water	1.00
1727: Funmar-----	55	Somewhat limited Seepage	0.05	Not limited		Very limited Deep to water	1.00
Taver-----	45	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.00	Very limited Deep to water	1.00
1804: Geary-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.11	Very limited Deep to water	1.00
1807: Geary, Moderately Eroded-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.53	Very limited Deep to water	1.00
1985: Hayes-----	60	Very limited Seepage	1.00	Somewhat limited Piping	0.42	Very limited Deep to water	1.00
1986: Hayes-----	55	Very limited Seepage	1.00	Somewhat limited Piping	0.42	Very limited Deep to water	1.00
Solvay-----	20	Very limited Seepage	1.00	Somewhat limited Seepage Depth to saturated zone	0.44 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
1987: Hayes-----	40	Very limited Seepage	1.00	Somewhat limited Piping	0.42	Very limited Deep to water	1.00
Turon-----	35	Very limited Seepage	1.00	Somewhat limited Piping Seepage	0.87 0.77	Very limited Deep to water	1.00
2204: Jamash-----	50	Somewhat limited Depth to bedrock	0.66	Very limited Thin layer	1.00	Very limited Deep to water	1.00
Piedmont-----	50	Somewhat limited Depth to bedrock Seepage	0.08 0.05	Somewhat limited Thin layer	0.81	Very limited Deep to water	1.00
2205: Jamash-----	60	Somewhat limited Depth to bedrock	0.66	Very limited Thin layer	1.00	Very limited Deep to water	1.00
Piedmont-----	40	Somewhat limited Depth to bedrock Seepage	0.08 0.05	Somewhat limited Thin layer	0.81	Very limited Deep to water	1.00
2206: Jamash-----	60	Somewhat limited Depth to bedrock	0.66	Very limited Thin layer	1.00	Very limited Deep to water	1.00
Piedmont-----	40	Somewhat limited Depth to bedrock Seepage	0.08 0.05	Somewhat limited Thin layer	0.81	Very limited Deep to water	1.00
2207: Jamash-----	80	Somewhat limited		Very limited		Very limited	



WATER MANAGEMENT--Continued  
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Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Depth to bedrock	0.66	Thin layer	1.00	Deep to water	1.00
2381: Kanza-----	50	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.90	Very limited Cutbanks cave	1.00
Ninnescah-----	50	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.12	Very limited Cutbanks cave Deep to water	1.00 0.00
2390: Kaskan-----	85	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Deep to water	1.00
2391: Kaskan-----	75	Very limited Seepage	1.00	Somewhat limited Seepage	0.43	Very limited Deep to water	1.00
2395: Kisiwa-----	90	Very limited Seepage	1.00	Very limited Ponding Depth to saturated zone Seepage Piping	1.00 1.00 1.00 1.00	Very limited Deep to water	1.00
2509: Ladysmith-----	100	Somewhat limited Seepage	0.01	Somewhat limited Hard to pack Depth to saturated zone	0.94 0.86	Very limited Deep to water	1.00
2556: Langdon-----	50	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited Deep to water	1.00
2587: Imano-----	85	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
2588: Longford, Moderately Eroded-----	90	Somewhat limited Seepage	0.05	Somewhat limited Hard to pack	0.59	Very limited Deep to water	1.00
2812: Mahone-----	95	Very limited Seepage	1.00	Very limited Piping Seepage	1.00 0.93	Very limited Deep to water	1.00
2948: Nalim-----	80	Very limited Seepage	1.00	Somewhat limited Seepage	0.98	Very limited Deep to water	1.00
2949: Naron, Moderately Eroded-----	85	Very limited Seepage	1.00	Somewhat limited Seepage	0.10	Very limited Deep to water	1.00
2950: Naron, Moderately Eroded-----	85	Very limited Seepage	1.00	Somewhat limited Seepage	0.10	Very limited Deep to water	1.00
2951: Nash-----	90	Somewhat limited Seepage Depth to bedrock	0.70 0.17	Very limited Piping Thin layer	1.00 0.91	Very limited Deep to water	1.00
2952: Nash-----	60	Somewhat limited Seepage Depth to bedrock	0.70 0.17	Very limited Piping Thin layer	1.00 0.91	Very limited Deep to water	1.00
Lucien-----	30	Very limited		Very limited		Very limited	



WATER MANAGEMENT--Continued  
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Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2953: Nash, Moderately Eroded-----	70	Seepage Depth to bedrock	1.00 0.74	Thin layer Seepage	1.00 0.02	Deep to water	1.00
		Somewhat limited		Very limited		Very limited	
Lucien-----	20	Seepage Depth to bedrock Slope	0.70 0.17 0.00	Piping Thin layer	1.00 0.91	Deep to water	1.00
		Very limited		Very limited		Very limited	
2955: Nickerson-----	100	Seepage Depth to bedrock Slope	1.00 0.74 0.00	Thin layer Seepage	1.00 0.02	Deep to water	1.00
		Very limited		Somewhat limited		Very limited	
2956: Nickerson-----	85	Seepage	1.00	Seepage Depth to saturated zone	0.76 0.43	Cutbanks cave Deep to water	1.00 0.25
		Very limited		Very limited		Very limited	
2957: Nickerson-----	50	Seepage	1.00	Piping Seepage Depth to saturated zone	1.00 0.76 0.43	Cutbanks cave Deep to water	1.00 0.25
		Very limited		Very limited		Very limited	
Punkin-----	50	Seepage	1.00	Seepage Piping	1.00 1.00	Deep to water	1.00
		Very limited		Very limited		Very limited	
2958: Ninnescah-----	85	Seepage	1.00	Depth to saturated zone Seepage	1.00 0.12	Cutbanks cave Deep to water	1.00 0.00
		Very limited		Very limited		Very limited	
2959: Ninnescah, saline---	100	Seepage	1.00	Depth to saturated zone Seepage	1.00 0.43	Cutbanks cave Salty water	1.00 0.06
		Very limited		Very limited		Very limited	
3051: Ost-----	90	Somewhat limited Seepage	0.05	Somewhat limited Piping	0.82	Very limited Deep to water	1.00
3052: Ost-----	55	Somewhat limited Seepage	0.05	Somewhat limited Piping	0.82	Very limited Deep to water	1.00
Clark-----	45	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.52	Very limited Deep to water	1.00
3170: Penalosa-----	100	Somewhat limited Seepage	0.70	Not limited		Very limited Deep to water	1.00
3171: Penalosa-----	100	Somewhat limited Seepage	0.70	Not limited		Very limited Deep to water	1.00
3180: Pratt-----	85	Very limited Seepage	1.00	Somewhat limited Seepage	0.86	Very limited Deep to water	1.00
3181: Pratt-----	45	Very limited Seepage	1.00	Somewhat limited Seepage	0.86	Very limited Deep to water	1.00
Turon-----	30	Very limited Seepage	1.00	Somewhat limited Piping	0.87	Very limited Deep to water	1.00



WATER MANAGEMENT--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3190: Punkin-----	90	Not limited		Seepage	0.77		
3191: Punkin-----	70	Not limited		Very limited Hard to pack Seepage	1.00 0.02	Very limited Deep to water	1.00
Taver-----	20	Somewhat limited Seepage	0.70	Very limited Hard to pack Seepage	1.00 0.02	Very limited Deep to water	1.00
3403: Sand Pit-----	100	Not rated		Somewhat limited Seepage	0.00	Very limited Deep to water	1.00
3469: Smolan-----	90	Somewhat limited Seepage	0.05	Not rated		Not rated	
3510: Saltcreek-----	50	Somewhat limited Seepage	0.70	Somewhat limited Hard to pack	0.41	Very limited Deep to water	1.00
Funmar-----	30	Somewhat limited Seepage	0.05	Not limited		Very limited Deep to water	1.00
Farnum-----	20	Somewhat limited Seepage	0.70	Not limited		Very limited Deep to water	1.00
3511: Saltcreek-----	70	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.01	Very limited Deep to water	1.00
Naron, sandy substratum-----	30	Very limited Seepage	1.00	Not limited		Very limited Deep to water	1.00
3512: Saltcreek-----	50	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.90	Very limited Deep to water	1.00
Naron-----	50	Very limited Seepage	1.00	Not limited		Very limited Deep to water	1.00
3520: Saxman-----	85	Very limited Seepage	1.00	Somewhat limited Seepage	0.55	Very limited Deep to water	1.00
3530: Shellabarger, Eroded	45	Somewhat limited Seepage	0.70	Very limited Seepage Depth to saturated zone	1.00 0.86	Very limited Cutbanks cave Deep to water	1.00 0.06
Albion-----	40	Very limited Seepage	1.00	Somewhat limited Seepage	0.88	Very limited Deep to water	1.00
3531: Shellabarger, Moderately Eroded--	50	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.90	Very limited Deep to water	1.00
Nalim-----	50	Very limited Seepage	1.00	Somewhat limited Seepage	0.88	Very limited Deep to water	1.00
3532: Shellabarger-----	80	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.98	Very limited Deep to water	1.00
3533: Shellabarger-----	85	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.88	Very limited Deep to water	1.00
3534: Shellabarger-----	85	Somewhat limited		Somewhat limited		Very limited	



WATER MANAGEMENT--Continued  
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Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Seepage	0.70	Seepage	0.88	Deep to water	1.00
3535: Shellabarger-----	55	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.88	Very limited Deep to water	1.00
Nalim-----	45	Very limited Seepage	1.00	Somewhat limited Seepage	0.98	Very limited Deep to water	1.00
3540: Solvay-----	90	Very limited Seepage	1.00	Somewhat limited Seepage Depth to saturated zone	0.44 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
3550: Spelvin-----	100	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Deep to water	1.00
3639: Taver-----	90	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.00	Very limited Deep to water	1.00
3640: Tivin-----	95	Very limited Seepage Slope	1.00 0.03	Very limited Seepage	1.00	Very limited Deep to water	1.00
3641: Tivin-----	45	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Deep to water	1.00
Dillhut-----	40	Very limited Seepage	1.00	Somewhat limited Seepage	0.13	Very limited Deep to water	1.00
3642: Tivin-----	70	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Deep to water	1.00
Willowbrook, occasionally flooded-----	30	Very limited  Seepage	 1.00	Very limited  Seepage Depth to saturated zone	 1.00 0.43	Very limited  Cutbanks cave Deep to water	 1.00 0.25
3643: Tobin-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.54	Very limited Deep to water	1.00
3644: Turon-----	65	Very limited Seepage	1.00	Somewhat limited Piping Seepage	0.87 0.77	Very limited Deep to water	1.00
Carway-----	20	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Deep to water	1.00
3760: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Blazefork, Protected	25	Somewhat limited Seepage	0.05	Not limited		Somewhat limited Slow refill Deep to water Cutbanks cave	0.95 0.81 0.10
Kaskan, Protected---	25	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Deep to water	1.00
3762: Urban Land-----	50	Not rated		Not rated		Not rated	
Darlow-----	25	Somewhat limited Seepage	0.70	Very limited Piping	1.00	Very limited Deep to water	1.00



WATER MANAGEMENT--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Elmer-----	15	Very limited Seepage	1.00	Salinity Seepage Very limited Piping Seepage	0.12 0.12 1.00 0.10	Very limited Deep to water	1.00
3763: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Imano, Protected----	40	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
3764: Urban Land, Protected-----	60	Not rated		Not rated		Not rated	
Mahone, Protected---	35	Very limited Seepage	1.00	Very limited Piping Seepage	1.00 0.93	Very limited Deep to water	1.00
3765: Urban Land-----	50	Not rated		Not rated		Not rated	
Saltcreek-----	35	Somewhat limited Seepage	0.70	Not limited		Very limited Deep to water	1.00
Naron-----	15	Very limited Seepage	1.00	Somewhat limited Seepage	0.90	Very limited Deep to water	1.00
3766: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Saxman, Protected---	45	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.86	Very limited Cutbanks cave Deep to water	1.00 0.06
3767: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Willowbrook, Protected-----	45	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
3768: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Yaggy, Protected----	45	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
3900: Walnut-----	75	Very limited Seepage	1.00	Very limited Ponding Depth to saturated zone Seepage	1.00 1.00 0.89	Very limited Cutbanks cave	1.00



WATER MANAGEMENT--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3926: Water-----	100	Not rated		Not rated		Not rated	
3966: Willowbrook-----	90	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
4004: Yaggy-----	95	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
4005: Yaggy-----	60	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
Saxman-----	30	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.86	Very limited Cutbanks cave Deep to water	1.00 0.06
4110: Zellmont-----	70	Somewhat limited Seepage Depth to bedrock	0.70 0.08	Somewhat limited Thin layer	0.81	Very limited Deep to water	1.00
Poxmash-----	30	Very limited Seepage Depth to bedrock	1.00 0.00	Very limited Seepage Thin layer	1.00 0.08	Very limited Deep to water	1.00
Aa: Abbyville-----	95	Not limited		Very limited Piping Depth to saturated zone Seepage	1.00 0.43 0.04	Very limited Slow refill Deep to water Cutbanks cave Salty water	1.00 0.25 0.10 0.01
Ae: Avans-----	85	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.74	Very limited Deep to water	1.00
AED: Arents, Earthen Dam-	100	Not rated		Not rated		Not rated	
Af: Avans-----	85	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.74	Very limited Deep to water	1.00
Ag: Aguents-----	100	Very limited Seepage	1.00	Very limited Ponding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Cutbanks cave	1.00
Ak: Abbyville, rarely flooded-----	45	Not limited		Very limited  Piping Depth to saturated zone Seepage	 1.00 0.43 0.04	Very limited  Slow refill Deep to water Cutbanks cave Salty water	 1.00 0.25 0.10 0.01
Kisiwa, occasionally flooded-----	40	Very limited  Seepage	 1.00	Very limited  Ponding Depth to saturated zone Seepage	 1.00 1.00 1.00	Very limited  Deep to water	 1.00



WATER MANAGEMENT--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
An: Zellmont-----	70	Somewhat limited Seepage Depth to bedrock	0.70 0.08	Piping  Somewhat limited Thin layer	1.00  0.81	Very limited Deep to water	1.00
Poxmash-----	30	Very limited Seepage Depth to bedrock	1.00 0.00	Very limited Seepage Thin layer	1.00 0.08	Very limited Deep to water	1.00
Ar: Arents, Landfill----	100	Very limited Seepage Slope	1.00 0.50	Very limited Hard to pack	1.00	Very limited Deep to water	1.00
Ba: Penalosa-----	100	Somewhat limited Seepage	0.70	Not limited		Very limited Deep to water	1.00
Bb: Penalosa-----	100	Somewhat limited Seepage	0.70	Not limited		Very limited Deep to water	1.00
Bf: Blazefork-----	90	Somewhat limited Seepage	0.05	Not limited		Somewhat limited Slow refill Deep to water Cutbanks cave	0.95 0.81 0.10
Bg: Buhler-----	65	Somewhat limited Seepage	0.70	Very limited Piping Seepage	1.00 0.09	Very limited Deep to water	1.00
Blazefork-----	30	Somewhat limited Seepage	0.05	Not limited		Somewhat limited Slow refill Deep to water Cutbanks cave	0.95 0.81 0.10
BkX: Blazefork-----	60	Somewhat limited Seepage	0.05	Not limited		Somewhat limited Slow refill Deep to water Cutbanks cave	0.95 0.81 0.10
Kaskan-----	40	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Deep to water	1.00
Cc: Carway-----	50	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Deep to water	1.00
Carbika-----	30	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.40	Very limited Deep to water	1.00
Cd: Carway-----	40	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Deep to water	1.00
Dillhut-----	30	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage Piping	1.00 1.00 0.53	Very limited Deep to water	1.00
Solvay-----	30	Very limited Seepage	1.00	Somewhat limited Seepage Depth to saturated zone	0.56 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
Cp: Clark-----	70	Somewhat limited		Somewhat limited		Very limited	



WATER MANAGEMENT--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ost-----	30	Seepage	0.70	Piping	0.52	Deep to water	1.00
Cr: Crete-----	100	Somewhat limited Seepage	0.05	Somewhat limited Piping	0.82	Very limited Deep to water	1.00
Cs: Crete-----	100	Somewhat limited Seepage	0.57	Not limited		Very limited Deep to water	1.00
DAM: Arents, Earthen Dam-	100	Somewhat limited Seepage	0.57	Not limited		Very limited Deep to water	1.00
De: Darlow-----	70	Not rated		Not rated		Not rated	
Elmer-----	20	Somewhat limited Seepage	0.70	Very limited Piping Salinity Seepage	1.00 0.12 0.12	Very limited Deep to water	1.00
Df: Dillhut-----	70	Very limited Seepage	1.00	Very limited Piping Seepage	1.00 0.10	Very limited Deep to water	1.00
Dp: Dillhut-----	35	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage Piping	1.00 1.00 0.53	Very limited Deep to water	1.00
Plev-----	35	Somewhat limited Seepage	1.00	Somewhat limited Seepage	0.13	Very limited Deep to water	1.00
Ds: Dillhut-----	30	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Deep to water	1.00
Solvay-----	30	Very limited Seepage	1.00	Somewhat limited Seepage	0.13	Very limited Deep to water	1.00
Fa: Farnum-----	40	Very limited Seepage	1.00	Somewhat limited Seepage Depth to saturated zone	0.56 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
Funmar-----	40	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.01	Very limited Deep to water	1.00
Ft: Funmar-----	55	Somewhat limited Seepage	0.05	Not limited		Very limited Deep to water	1.00
Taver-----	45	Somewhat limited Seepage	0.05	Not limited		Very limited Deep to water	1.00
Ge: Geary-----	100	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.00	Very limited Deep to water	1.00
Gg: Geary, Moderately Eroded-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.11	Very limited Deep to water	1.00
Ha: Hayes-----	60	Somewhat limited Seepage	0.70	Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.53	Deep to water	1.00
		Very limited Seepage	1.00	Somewhat limited Piping	0.42	Very limited Deep to water	1.00



WATER MANAGEMENT--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Hs: Hayes-----	55	Very limited Seepage	1.00	Somewhat limited Piping	0.42	Very limited Deep to water	1.00
Solvay-----	20	Very limited Seepage	1.00	Somewhat limited Seepage Depth to saturated zone	0.44 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
Ht: Hayes-----	40	Very limited Seepage	1.00	Somewhat limited Piping	0.42	Very limited Deep to water	1.00
Turon-----	35	Very limited Seepage	1.00	Somewhat limited Piping Seepage	0.87 0.77	Very limited Deep to water	1.00
Ja: Jamash-----	50	Somewhat limited Depth to bedrock	0.66	Very limited Thin layer	1.00	Very limited Deep to water	1.00
Piedmont-----	50	Somewhat limited Depth to bedrock Seepage	0.08 0.05	Somewhat limited Thin layer	0.81	Very limited Deep to water	1.00
Jb: Jamash-----	60	Somewhat limited Depth to bedrock	0.66	Very limited Thin layer	1.00	Very limited Deep to water	1.00
Piedmont-----	40	Somewhat limited Depth to bedrock Seepage	0.08 0.05	Somewhat limited Thin layer	0.81	Very limited Deep to water	1.00
Jc: Jamash-----	80	Somewhat limited Depth to bedrock	0.66	Very limited Thin layer	1.00	Very limited Deep to water	1.00
Jd: Jamash-----	60	Somewhat limited Depth to bedrock	0.66	Very limited Thin layer	1.00	Very limited Deep to water	1.00
Piedmont-----	40	Somewhat limited Depth to bedrock Seepage	0.08 0.05	Somewhat limited Thin layer	0.81	Very limited Deep to water	1.00
Kg: Kaskan-----	85	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Deep to water	1.00
Kh: Kaskan-----	75	Very limited Seepage	1.00	Somewhat limited Seepage	0.43	Very limited Deep to water	1.00
Kn: Kanza-----	50	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.90	Very limited Cutbanks cave	1.00
Ninnescah-----	50	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.12	Very limited Cutbanks cave Deep to water	1.00 0.00
Ks: Kisiwa-----	90	Very limited Seepage	1.00	Very limited Ponding Depth to saturated zone Seepage Piping	1.00 1.00 1.00 1.00	Very limited Deep to water	1.00
La: Ladysmith-----	100	Somewhat limited Seepage	0.01	Somewhat limited Hard to pack Depth to saturated zone	0.94 0.86	Very limited Deep to water	1.00
Le: Imano-----	85	Very limited		Very limited		Very limited	



WATER MANAGEMENT--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Lo: Longford, Moderately Eroded-----	90	Seepage	1.00	Seepage Depth to saturated zone	1.00 0.43	Cutbanks cave Deep to water	1.00 0.25
		Somewhat limited		Somewhat limited		Very limited	
Lt: Langdon-----	50	Seepage	0.05	Hard to pack	0.59	Deep to water	1.00
		Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited Deep to water	1.00
NaX: Nalim-----	80	Very limited Seepage	1.00	Somewhat limited Seepage	0.98	Very limited Deep to water	1.00
Nk: Nickerson-----	100	Very limited Seepage	1.00	Somewhat limited Seepage Depth to saturated zone	0.76 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
		Very limited Seepage	1.00	Very limited Piping Seepage Depth to saturated zone	1.00 0.76 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
Np: Nickerson-----	50	Very limited Seepage	1.00	Very limited Seepage Piping	1.00 1.00	Very limited Deep to water	1.00
Punkin-----	50	Very limited Seepage	1.00	Very limited Seepage Piping	1.00 1.00	Very limited Deep to water	1.00
Oc: Ost-----	55	Somewhat limited Seepage	0.05	Somewhat limited Piping	0.82	Very limited Deep to water	1.00
Clark-----	45	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.52	Very limited Deep to water	1.00
Om: Ost-----	90	Somewhat limited Seepage	0.05	Somewhat limited Piping	0.82	Very limited Deep to water	1.00
Pr: Pratt-----	45	Very limited Seepage	1.00	Somewhat limited Seepage	0.86	Very limited Deep to water	1.00
Turon-----	30	Very limited Seepage	1.00	Somewhat limited Piping Seepage	0.87 0.77	Very limited Deep to water	1.00
Ps: Pratt-----	85	Very limited Seepage	1.00	Somewhat limited Seepage	0.86	Very limited Deep to water	1.00
Pz: Punkin-----	90	Not limited		Very limited Hard to pack Seepage	1.00 0.02	Very limited Deep to water	1.00
Sa: Shellabarger-----	85	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.88	Very limited Deep to water	1.00
Sb: Shellabarger-----	85	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.88	Very limited Deep to water	1.00
Sd: Shellabarger-----	80	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.88	Very limited Deep to water	1.00
SfX: Saltcreek-----	50	Somewhat limited Seepage	0.70	Not limited		Very limited Deep to water	1.00
Funmar-----	30	Somewhat limited		Not limited		Very limited	



WATER MANAGEMENT--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Seepage	0.05			Deep to water	1.00
Farnum-----	20	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.01	Very limited Deep to water	1.00
Sg: Saltcreek-----	70	Somewhat limited Seepage	0.70	Not limited		Very limited Deep to water	1.00
Naron, sandy substratum-----	30	Very limited Seepage	1.00	Somewhat limited Seepage	0.90	Very limited Deep to water	1.00
Sh1: Saltcreek-----	50	Somewhat limited Seepage	0.70	Not limited		Very limited Deep to water	1.00
Naron-----	50	Very limited Seepage	1.00	Somewhat limited Seepage	0.55	Very limited Deep to water	1.00
Sl: Smolan-----	90	Somewhat limited Seepage	0.05	Somewhat limited Hard to pack	0.41	Very limited Deep to water	1.00
Sm: Shellabarger-----	55	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.88	Very limited Deep to water	1.00
Nalim-----	45	Very limited Seepage	1.00	Somewhat limited Seepage	0.98	Very limited Deep to water	1.00
Sn: Shellabarger, Moderately Eroded--	50	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.88	Very limited Deep to water	1.00
Nalim-----	50	Very limited Seepage	1.00	Somewhat limited Seepage	0.98	Very limited Deep to water	1.00
So: Solvay-----	90	Very limited Seepage	1.00	Somewhat limited Seepage Depth to saturated zone	0.44 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
Sx: Saxman-----	85	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.86	Very limited Cutbanks cave Deep to water	1.00 0.06
Tc: Turon-----	65	Very limited Seepage	1.00	Somewhat limited Piping Seepage	0.87 0.77	Very limited Deep to water	1.00
Carway-----	20	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Deep to water	1.00
Td: Tivin-----	45	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Deep to water	1.00
Dillhut-----	40	Very limited Seepage	1.00	Somewhat limited Seepage	0.13	Very limited Deep to water	1.00
To: Tobin-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.54	Very limited Deep to water	1.00
Tw: Tivin-----	70	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Deep to water	1.00
Willowbrook, occasionally flooded-----	30	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Cutbanks cave	1.00



WATER MANAGEMENT--Continued  
Reno County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Uc: Urban Land, Protected-----	60	Not rated		Depth to saturated zone	0.43	Deep to water	0.25
Mahone, Protected---	35	Very limited Seepage	1.00	Not rated		Not rated	
Ug: Urban Land-----	50	Very limited Seepage	1.00	Very limited Piping Seepage	1.00 0.93	Very limited Deep to water	1.00
Darlow-----	25	Not rated		Not rated		Not rated	
Elmer-----	15	Somewhat limited Seepage	0.70	Very limited Piping Salinity Seepage	1.00 0.12 0.12	Very limited Deep to water	1.00
Uk: Urban Land, Protected-----	50	Very limited Seepage	1.00	Very limited Piping Seepage	1.00 0.10	Very limited Deep to water	1.00
Blazefork, Protected	25	Not rated		Not rated		Not rated	
Kaskan, Protected---	25	Somewhat limited Seepage	0.05	Very limited Seepage	1.00	Somewhat limited Slow refill Deep to water Cutbanks cave	0.95 0.81 0.10
Um: Urban Land, Protected-----	50	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Deep to water	1.00
Imano, Protected----	40	Not rated		Not rated		Not rated	
Un: Urban Land-----	50	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
Saltcreek-----	35	Not rated		Not rated		Not rated	
Naron-----	15	Somewhat limited Seepage	0.70	Not limited		Very limited Deep to water	1.00
Us: Urban Land, Protected-----	50	Very limited Seepage	1.00	Somewhat limited Seepage	0.90	Very limited Deep to water	1.00
Saxman, Protected---	45	Not rated		Not rated		Not rated	
Uw: Urban Land, Protected-----	50	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.86	Very limited Cutbanks cave Deep to water	1.00 0.06
		Not rated		Not rated		Not rated	



WATER MANAGEMENT--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Willowbrook, Protected-----	45	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
Uy: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Yaggy, Protected----	45	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
W: Water-----	100	Not rated		Not rated		Not rated	
Wb: Willowbrook-----	90	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
Ya: Yaggy-----	95	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
Ys: Yaggy-----	60	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
Saxman-----	30	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.86	Very limited Cutbanks cave Deep to water	1.00 0.06
Zp: Zellmont-----	70	Somewhat limited Seepage Depth to bedrock	0.70 0.08	Somewhat limited Thin layer	0.81	Very limited Deep to water	1.00
Poxmash-----	30	Very limited Seepage Depth to bedrock	1.00 0.00	Very limited Seepage Thin layer	1.00 0.08	Very limited Deep to water	1.00



SANITARY FACILITIES  
Reno County, Kansas

Sanitary Facilities

The following tables show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

A trench sanitary landfill is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include permeability, depth to bedrock or a cemented pan, depth to a water table, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Hard, nonrippable bedrock, creviced bedrock, or highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.



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In an area sanitary landfill, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a water table, ponding, slope, and depth to bedrock or a cemented pan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or if fractured bedrock, a fractured cemented pan, or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, rock fragments, slope, depth to bedrock or a cemented pan, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.



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Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
990: Abbyville-----	95	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00
991: Abbyville, rarely flooded-----	45	Very limited  Restricted permeability Depth to saturated zone Flooding	1.00 1.00 0.40	Very limited  Depth to saturated zone Flooding	1.00 0.40
Kisiwa, occasionally flooded-----	40	Very limited  Flooding Restricted permeability Ponding Depth to saturated zone Filtering capacity	1.00 1.00 1.00 1.00 1.00	Very limited  Ponding Flooding Seepage	1.00 1.00 1.00
1004: Albion-----	90	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
1011: Albion-----	70	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
Shellabarger-----	30	Somewhat limited Restricted permeability	0.50	Slope Somewhat limited Seepage Slope	0.09 0.50 0.00
1057: Aguents-----	100	Very limited Ponding Depth to saturated zone Filtering capacity	1.00 1.00 1.00	Very limited Ponding Seepage Depth to saturated zone	1.00 1.00 1.00
1061: Arents, Earthen Dam-	100	Not rated		Not rated	
1062: Arents, Landfill----	100	Very limited Slope	1.00	Very limited Slope	1.00
1070: Avans-----	100	Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage	0.50
1071: Avans-----	85	Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage Slope	0.50 0.00
1072: Avans-----	85	Somewhat limited Restricted permeability	0.50	Somewhat limited Slope Seepage	0.67 0.50
1191: Blazefork-----	90	Very limited Restricted permeability Depth to saturated zone Flooding	1.00 1.00 0.40	Somewhat limited Depth to saturated zone Flooding	0.71 0.40
1192: Blazefork-----	60	Very limited Restricted permeability Depth to saturated zone Flooding	1.00 1.00 0.40	Somewhat limited Depth to saturated zone Flooding	0.71 0.40
Kaskan-----	40	Very limited		Very limited	



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Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1200: Buhler-----	65	Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.50	Flooding	0.40
		Depth to saturated zone	0.43		
		Flooding	0.40		
Blazefork-----	30	Very limited		Somewhat limited	
		Restricted permeability	1.00	Seepage	0.50
		Depth to saturated zone	0.43	Flooding	0.40
		Flooding	0.40		
1324: Carway-----	50	Very limited		Somewhat limited	
		Restricted permeability	1.00	Depth to saturated zone	0.71
		Depth to saturated zone	1.00	Flooding	0.40
		Flooding	0.40		
Carbika-----	30	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Seepage	0.50
		Restricted permeability	0.50		
1357: Carway-----	40	Very limited		Very limited	
		Restricted permeability	1.00	Ponding	1.00
		Ponding	1.00	Seepage	0.50
		Depth to saturated zone	1.00		
Dillhut-----	30	Very limited		Very limited	
		Restricted permeability	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	0.00
		Filtering capacity	1.00		
Solvay-----	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Restricted permeability	0.68	Depth to saturated zone	1.00
1359: Clark-----	70	Somewhat limited		Somewhat limited	
		Restricted permeability	0.50	Seepage	0.50
				Slope	0.33
				Somewhat limited Slope	0.67
1428: Crete-----	100	Very limited		Somewhat limited	
		Restricted permeability	1.00	Seepage	0.32
1429: Crete-----	100	Very limited		Somewhat limited	
		Restricted permeability	1.00	Seepage	0.32
				Slope	0.00
1553: Darlow-----	70	Very limited		Not limited	
		Restricted permeability	1.00		
Elmer-----	20	Very limited		Very limited	
		Restricted permeability	1.00	Seepage	1.00
1554: Dillhut-----	70	Very limited		Very limited	
		Restricted permeability	1.00	Seepage	1.00



SANITARY FACILITIES--Continued  
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Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1555: Dillhut-----	35	Depth to saturated zone	1.00	Depth to saturated zone	0.00
		Filtering capacity	1.00	Slope	0.00
		Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Restricted permeability	0.50	Slope	0.00
Plev-----	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00		
		Restricted permeability	0.50		
1556: Dillhut-----	30	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.50	Slope	0.00
		Very limited		Very limited	
Solvay-----	30	Depth to saturated zone	1.00	Seepage	1.00
		Restricted permeability	0.68	Depth to saturated zone	1.00
		Somewhat limited		Somewhat limited	
		Restricted permeability	0.50	Seepage	0.50
1725: Farnum-----	40	Very limited		Not limited	
		Restricted permeability	1.00		
1727: Funmar-----	55	Very limited		Not limited	
		Restricted permeability	1.00		
Taver-----	45	Very limited		Not limited	
		Restricted permeability	1.00		
1804: Geary-----	100	Somewhat limited		Somewhat limited	
		Restricted permeability	0.50	Seepage	0.50
1807: Geary, Moderately Eroded-----	100	Somewhat limited		Slope	0.00
		Restricted permeability	0.50	Seepage	0.50
		Very limited		Very limited	
		Restricted permeability	1.00	Seepage	1.00
1985: Hayes-----	60	Very limited		Slope	0.09
		Restricted permeability	1.00	Very limited	
1986: Hayes-----	55	Very limited		Seepage	1.00
		Restricted permeability	1.00	Slope	0.09
		Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
Solvay-----	20	Restricted permeability	0.68	Depth to saturated zone	1.00
		Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Restricted permeability	0.68	Depth to saturated zone	1.00
1987: Hayes-----	40	Very limited		Very limited	
		Restricted permeability	1.00	Seepage	1.00
		Very limited		Slope	0.09
		Restricted permeability	1.00	Very limited	
Turon-----	35	Filtering capacity	1.00	Seepage	1.00
		Very limited		Slope	0.09
2204: Jamash-----	50	Very limited		Very limited	



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Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Piedmont----- 2205: Jamash-----	50	Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Very limited Restricted permeability	1.00	Very limited Depth to soft bedrock	1.00
		Depth to bedrock	1.00		
Piedmont----- 2206: Jamash-----	60	Very limited Depth to bedrock	1.00	Very limited Depth to soft bedrock	1.00
				Slope	0.00
		Very limited Restricted permeability	1.00	Very limited Depth to soft bedrock	1.00
Piedmont----- 2207: Jamash-----	40	Depth to bedrock	1.00	Slope	0.00
		Very limited Depth to bedrock	1.00	Very limited Depth to soft bedrock	1.00
				Slope	0.00
Piedmont----- 2381: Kanza-----	40	Very limited Restricted permeability	1.00	Very limited Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	0.91
		Very limited Depth to bedrock	1.00	Very limited Depth to soft bedrock	1.00
Piedmont----- 2390: Kaskan-----	85	Very limited Depth to bedrock	1.00	Slope	0.91
		Very limited Flooding	1.00	Very limited Depth to soft bedrock	1.00
		Depth to saturated zone	1.00	Slope	0.67
Ninnescah----- 2391: Kaskan-----	50	Filtering capacity	1.00	Very limited Flooding	1.00
		Very limited Flooding	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
2395: Kisiwa-----	85	Filtering capacity	1.00	Very limited Seepage	1.00
		Restricted permeability	0.50	Flooding	0.40
		Depth to saturated zone	0.43		
2509: Ladysmith-----	75	Flooding	0.40		
		Very limited Flooding	1.00	Very limited Flooding	1.00
		Filtering capacity	1.00	Seepage	1.00
2556: Langdon-----	90	Depth to saturated zone	0.43		
		Filtering capacity	1.00	Very limited Ponding	1.00
		Very limited Restricted permeability	1.00	Seepage	1.00
2587: Imano-----	100	Ponding	1.00		
		Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.81
		Very limited Filtering capacity	1.00		
2587: Imano-----	50	Slope	0.00	Very limited Seepage	1.00
				Slope	1.00
		Very limited		Very limited	



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Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
2588: Longford, Moderately Eroded-----	90	Flooding	1.00	Flooding	1.00
		Restricted permeability	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Filtering capacity	1.00		
2812: Mahone-----	95	Very limited		Somewhat limited	
		Restricted permeability	1.00	Slope	0.33
		Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Restricted permeability	0.50	Flooding	0.40
2948: Nalim-----	80	Depth to saturated zone	0.43		
		Flooding	0.40		
		Very limited Restricted permeability	1.00	Very limited Seepage	1.00
		Filtering capacity	1.00		
2949: Naron, Moderately Eroded-----	85	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.50	Slope	0.33
2950: Naron, Moderately Eroded-----	85	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.50	Slope	1.00
2951: Nash-----	90	Slope	0.16		
		Very limited Depth to bedrock	1.00	Very limited Depth to soft bedrock	1.00
		Restricted permeability	0.50	Seepage	0.50
2952: Nash-----	60			Slope	0.00
		Very limited Depth to bedrock	1.00	Very limited Depth to soft bedrock	1.00
		Restricted permeability	0.50	Slope	0.67
Lucien-----	30			Seepage	0.50
		Very limited Depth to bedrock	1.00	Very limited Depth to soft bedrock	1.00
				Slope	0.91
2953: Nash, Moderately Eroded-----	70	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Restricted permeability	0.50	Slope	1.00
Lucien-----	20	Slope	0.37	Seepage	0.50
		Very limited Depth to bedrock	1.00	Very limited Depth to soft bedrock	1.00
		Slope	0.63	Slope	1.00
2955: Nickerson-----	100	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
2956: Nickerson-----	85	Filtering capacity	1.00	Depth to saturated zone	1.00
		Very limited		Very limited	



SANITARY FACILITIES--Continued  
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Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
2957: Nickerson-----	50	Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Very limited Depth to saturated zone	1.00	Very limited Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
Punkin-----	50	Very limited Restricted permeability	1.00	Very limited Seepage	1.00
		Filtering capacity	1.00		
2958: Ninnescah-----	85	Very limited Flooding	1.00	Very limited Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
2959: Ninnescah, saline---	100	Very limited Flooding	1.00	Very limited Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
3051: Ost-----	90	Very limited Restricted permeability	1.00	Not limited	
3052: Ost-----	55	Very limited Restricted permeability	1.00	Somewhat limited Slope	0.00
Clark-----	45	Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage	0.50
				Slope	0.00
3170: Penalosa-----	100	Very limited Restricted permeability	1.00	Somewhat limited Seepage	0.50
3171: Penalosa-----	100	Very limited Restricted permeability	1.00	Somewhat limited Seepage	0.50
3180: Pratt-----	85	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
3181: Pratt-----	45	Very limited Filtering capacity	1.00	Slope	1.00
				Very limited Seepage	1.00
Turon-----	30	Very limited Restricted permeability Filtering capacity	1.00	Slope	0.09
				Very limited Seepage	1.00
3190: Punkin-----	90	Very limited Restricted permeability	1.00	Slope	0.09
				Somewhat limited Seepage	0.50
3191: Punkin-----	70	Very limited Restricted permeability	1.00	Somewhat limited Seepage	0.50
Taver-----	20	Very limited Restricted permeability	1.00	Not limited	
3403: Sand Pit-----	100	Not rated		Not rated	
3469: Smolan-----	90	Very limited		Somewhat limited	



SANITARY FACILITIES--Continued  
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Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
3510: Saltcreek-----	50	Restricted permeability	1.00	Slope	0.00
		Very limited Restricted permeability	1.00	Somewhat limited Seepage	0.50
		Funmar-----	30	Slope Not limited	0.00
Farnum-----	20	Very limited Restricted permeability	1.00		
3511: Saltcreek-----	70	Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage	0.50
		Very limited Restricted permeability	1.00	Somewhat limited Seepage	0.50
		Naron, sandy substratum-----	30	Very limited	
3512: Saltcreek-----	50	Filtering capacity Restricted permeability	1.00	Seepage	1.00
			0.50		
		Very limited Restricted permeability	1.00	Somewhat limited Seepage	0.50
Naron-----	50	Slope	0.00	Slope	0.00
		Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Restricted permeability	0.50	Slope	0.00
3520: Saxman-----	85	Very limited Depth to saturated zone	1.00	Very limited Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40
3530: Shellabarger, Eroded	45	Somewhat limited Restricted permeability	0.50	Very limited Slope	1.00
		Slope	0.16	Seepage	0.50
		Albion-----	40	Very limited Seepage	1.00
3531: Shellabarger, Moderately Eroded--	50	Filtering capacity	1.00	Seepage	1.00
		Slope	0.16	Slope	1.00
		Somewhat limited		Somewhat limited	
Nalim-----	50	Restricted permeability	0.50	Seepage	0.50
		Very limited Restricted permeability	1.00	Slope Very limited Seepage	0.33 1.00
		Filtering capacity	1.00	Slope	0.33
3532: Shellabarger-----	80	Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage	0.50
				Slope	0.00
3533: Shellabarger-----	85	Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage	0.50
3534: Shellabarger-----	85	Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage	0.50
				Slope	0.00
3535: Shellabarger-----	55	Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage	0.50
				Slope	0.00
Nalim-----	45	Very limited		Very limited	



SANITARY FACILITIES--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
3540: Solvay-----	90	Restricted permeability	1.00	Seepage	1.00
		Filtering capacity	1.00	Slope	0.00
		Very limited Depth to saturated zone	1.00	Very limited Seepage	1.00
		Restricted permeability	0.68	Depth to saturated zone	1.00
3550: Spelvin-----	100	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Restricted permeability	0.50		
3639: Taver-----	90	Very limited Restricted permeability	1.00	Not limited	
3640: Tivin-----	95	Very limited Filtering capacity	1.00	Very limited Slope	1.00
		Slope	1.00	Seepage	1.00
3641: Tivin-----	45	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Slope	0.16	Slope	1.00
Dillhut-----	40	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Restricted permeability	0.50	Slope	0.09
3642: Tivin-----	70	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Depth to saturated zone	0.08	Slope	0.91
Willowbrook, occasionally flooded-----	30	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Filtering capacity	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
3643: Tobin-----	100	Very limited Flooding	1.00	Very limited Flooding	1.00
		Restricted permeability	0.50	Seepage	0.50
3644: Turon-----	65	Very limited Restricted permeability	1.00	Very limited Seepage	1.00
		Filtering capacity	1.00	Slope	0.33
Carway-----	20	Very limited Restricted permeability	1.00	Very limited Ponding	1.00
		Ponding	1.00	Seepage	0.50
		Depth to saturated zone	1.00		
3760: Urban Land, Protected-----	50	Not rated		Not rated	
Blazefork, Protected	25	Very limited Restricted permeability	1.00	Somewhat limited Depth to saturated zone	0.71
		Depth to saturated zone	1.00		
Kaskan, Protected---	25	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Restricted permeability	0.50		



SANITARY FACILITIES--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
3762: Urban Land-----	50	Depth to saturated zone	0.43		
Darlow-----	25	Not rated		Not rated	
Elmer-----	15	Very limited Restricted permeability	1.00	Not limited	
3763: Urban Land, Protected-----	50	Very limited Restricted permeability	1.00	Very limited Seepage	1.00
Imano, Protected----	40	Not rated		Not rated	
		Very limited Restricted permeability	1.00	Very limited Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Filtering capacity	1.00		
3764: Urban Land, Protected-----	60	Not rated		Not rated	
Mahone, Protected---	35	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Restricted permeability	0.50		
		Depth to saturated zone	0.43		
3765: Urban Land-----	50	Not rated		Not rated	
Saltcreek-----	35	Very limited Restricted permeability	1.00	Somewhat limited Seepage	0.50
Naron-----	15	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Restricted permeability	0.50		
3766: Urban Land, Protected-----	50	Not rated		Not rated	
Saxman, Protected---	45	Very limited Depth to saturated zone	1.00	Very limited Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
3767: Urban Land, Protected-----	50	Not rated		Not rated	
Willowbrook, Protected-----	45	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
3768: Urban Land, Protected-----	50	Not rated		Not rated	
Yaggy, Protected----	45	Very limited Depth to saturated zone	1.00	Very limited Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
3900: Walnut-----	75	Very limited Ponding	1.00	Very limited Ponding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00



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Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
3926: Water-----	100	Not rated		Not rated	
3966: Willowbrook-----	90	Very limited Flooding Filtering capacity Depth to saturated zone	1.00 1.00 1.00	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 1.00
4004: Yaggy-----	95	Very limited Flooding Depth to saturated zone Filtering capacity	1.00 1.00 1.00	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 1.00
4005: Yaggy-----	60	Very limited Flooding Depth to saturated zone Filtering capacity	1.00 1.00 1.00	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 1.00
Saxman-----	30	Very limited Depth to saturated zone Filtering capacity Flooding	1.00 1.00 1.00 0.40	Very limited Seepage Depth to saturated zone Flooding	1.00 1.00 1.00 0.40
4110: Zellmont-----	70	Very limited Depth to bedrock Restricted permeability	1.00 1.00	Very limited Depth to soft bedrock Seepage	1.00 0.50
Poxmash-----	30	Very limited Filtering capacity Depth to bedrock	1.00 0.73	Very limited Seepage Depth to soft bedrock	1.00 0.32



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Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
990: Abbyville-----	95	Very limited Depth to saturated zone Sodium content Too clayey	1.00 1.00 0.50	Very limited Depth to saturated zone	1.00	Very limited Sodium content  Too clayey Depth to saturated zone	1.00  0.50 0.09
991: Abbyville, rarely flooded-----	45	Very limited  Depth to saturated zone Sodium content Too clayey	1.00 1.00 0.50	Very limited  Depth to saturated zone Flooding	1.00 0.40	Very limited  Sodium content Too clayey Depth to saturated zone	1.00 0.50 0.09
Kisiwa, occasionally flooded-----	40	Flooding Very limited  Flooding Depth to saturated zone Ponding  Sodium content Seepage	0.40 1.00 1.00 1.00 1.00	Very limited  Flooding Ponding  Depth to saturated zone	1.00 1.00 1.00	Very limited  Ponding Depth to saturated zone Seepage  Sodium content Too clayey	1.00 1.00 1.00 1.00
1004: Albion-----	90	Very limited Seepage Too Sandy	1.00 1.00	Very limited Seepage	1.00	Very limited Too Sandy Seepage	1.00 1.00
1011: Albion-----	70	Very limited Seepage Too Sandy	1.00 1.00	Very limited Seepage	1.00	Very limited Too Sandy Seepage	1.00 1.00
Shellabarger-----	30	Not limited		Not limited		Not limited	
1057: Aquents-----	100	Very limited Depth to saturated zone Ponding  Seepage Too Sandy	1.00 1.00 1.00 1.00	Very limited Ponding  Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Ponding  Depth to saturated zone Too Sandy Seepage	1.00 1.00 1.00 1.00
1061: Arents, Earthen Dam-	100	Not rated		Not rated		Not rated	
1062: Arents, Landfill----	100	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
1070: Avans-----	100	Not limited		Not limited		Not limited	
1071: Avans-----	85	Not limited		Not limited		Not limited	
1072: Avans-----	85	Not limited		Not limited		Not limited	
1191: Blazefork-----	90	Very limited Depth to saturated zone Too clayey Flooding	1.00 0.50 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40	Somewhat limited Too clayey	0.50
1192: Blazefork-----	60	Very limited Depth to saturated zone Too clayey Flooding	1.00 0.50 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40	Somewhat limited Too clayey	0.50
Kaskan-----	40	Very limited Depth to saturated zone Seepage Too Sandy Flooding	1.00 1.00 1.00 0.40	Very limited Depth to saturated zone Seepage Flooding	1.00 1.00 0.40	Very limited Too Sandy Seepage	1.00 1.00
1200: Buhler-----	65	Very limited Depth to saturated zone Sodium content Flooding	1.00 1.00 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Sodium content Too clayey	1.00 0.50
Blazefork-----	30	Very limited Depth to saturated zone Too clayey	1.00 0.50	Very limited Depth to saturated zone Flooding	1.00 0.40	Somewhat limited Too clayey	0.50



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Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1324: Carway-----	50	Flooding	0.40				
		Very limited	1.00	Very limited	1.00	Very limited	1.00
		Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Carbika-----	30	Too clayey	0.50			Hard to compact	1.00
		Very limited	1.00	Very limited	1.00	Too clayey	0.50
		Depth to saturated zone	1.00	Ponding	1.00	Very limited	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
1357: Carway-----	40	Too clayey	0.50			Depth to saturated zone	1.00
		Very limited	1.00	Very limited	1.00	Too clayey	0.50
		Depth to saturated zone	1.00	Ponding	1.00	Very limited	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
Dillhut-----	30	Too clayey	0.50			Depth to saturated zone	1.00
		Very limited	1.00	Very limited	1.00	Hard to compact	1.00
		Depth to saturated zone	1.00	Seepage	1.00	Too clayey	0.50
		Too Sandy	1.00	Depth to saturated zone	1.00	Too Sandy	1.00
Solvay-----	30					Seepage	1.00
		Very limited	1.00	Very limited	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Somewhat limited	0.50
		Seepage	1.00	Seepage	1.00	Seepage	0.09
1359: Clark-----	70	Not limited		Not limited		Depth to saturated zone	
1428: Ost-----	30	Not limited		Not limited		Not limited	
1428: Crete-----	100	Somewhat limited		Not limited		Not limited	
		Too clayey	0.50			Very limited	
1429: Crete-----	100					Too clayey	1.00
		Not limited		Not limited		Hard to compact	1.00
1553: Darlow-----	70					Very limited	
		Very limited		Not limited		Too clayey	1.00
Elmer-----	20	Sodium content	1.00	Not limited		Hard to compact	1.00
		Very limited	1.00	Not limited			
1554: Dillhut-----	70	Sodium content	1.00			Very limited	
		Seepage	1.00			Sodium content	1.00
1555: Dillhut-----	35					Seepage	0.16
		Very limited		Very limited			
		Depth to saturated zone	1.00	Seepage	1.00	Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
1556: Dillhut-----	30	Too Sandy	1.00			Too Sandy	1.00
		Very limited		Very limited		Seepage	1.00
		Seepage		Seepage	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
1725: Farnum-----	40						
		Not limited		Not limited		Not limited	
		Somewhat limited		Not limited		Very limited	
		Too clayey	0.50	Not limited		Hard to compact	1.00



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Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1727: Funmar-----	55	Somewhat limited Too clayey	0.50	Not limited		Very limited Hard to compact Too clayey	1.00 0.50
Taver-----	45	Somewhat limited Too clayey	0.50	Not limited		Very limited Hard to compact Too clayey	1.00 0.50
1804: Geary-----	100	Somewhat limited Too clayey	0.50	Not limited		Somewhat limited Too clayey	0.50
1807: Geary, Moderately Eroded-----	100	Somewhat limited Too clayey	0.50	Not limited		Somewhat limited Too clayey	0.50
1985: Hayes-----	60	Very limited Too clayey	1.00	Very limited Seepage	1.00	Very limited Hard to compact	1.00
1986: Hayes-----	55	Very limited Too clayey	1.00	Very limited Seepage	1.00	Very limited Hard to compact	1.00
Solvay-----	20	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Somewhat limited Seepage Depth to saturated zone	0.50 0.09
1987: Hayes-----	40	Very limited Too clayey	1.00	Very limited Seepage	1.00	Very limited Hard to compact	1.00
Turon-----	35	Very limited Too Sandy	1.00	Very limited Seepage	1.00	Very limited Seepage Too Sandy	1.00 0.50
2204: Jamash-----	50	Very limited Depth to bedrock Too clayey	1.00 0.50	Very limited Depth to bedrock	1.00	Very limited Depth to bedrock Too clayey	1.00 0.50
Piedmont-----	50	Very limited Depth to bedrock Too clayey	1.00 1.00	Very limited Depth to bedrock	1.00	Very limited Depth to bedrock Too clayey Hard to compact	1.00 1.00 1.00
2205: Jamash-----	60	Very limited Depth to bedrock Too clayey	1.00 0.50	Very limited Depth to bedrock	1.00	Very limited Depth to bedrock Too clayey	1.00 0.50
Piedmont-----	40	Very limited Depth to bedrock Too clayey	1.00 1.00	Very limited Depth to bedrock	1.00	Very limited Depth to bedrock Too clayey Hard to compact	1.00 1.00 1.00
2206: Jamash-----	60	Very limited Depth to bedrock Too clayey	1.00 0.50	Very limited Depth to bedrock	1.00	Very limited Depth to bedrock Too clayey	1.00 0.50
Piedmont-----	40	Very limited Depth to bedrock Too clayey	1.00 1.00	Very limited Depth to bedrock	1.00	Very limited Depth to bedrock Too clayey Hard to compact	1.00 1.00 1.00
2207: Jamash-----	80	Very limited Depth to bedrock Too clayey	1.00 0.50	Very limited Depth to bedrock	1.00	Very limited Depth to bedrock Too clayey	1.00 0.50
2381: Kanza-----	50	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Too Sandy Seepage Depth to saturated zone	1.00 1.00 1.00
Ninnescah-----	50	Too Sandy Very limited Flooding Depth to saturated zone Too Sandy Seepage	1.00 1.00 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Seepage Depth to saturated zone Too Sandy	1.00 0.86 0.50
2390: Kaskan-----	85	Very limited Depth to saturated zone Seepage Too Sandy Flooding	1.00 1.00 1.00 0.40	Very limited Depth to saturated zone Seepage Flooding	1.00 1.00 0.40	Very limited Too Sandy Seepage	1.00 1.00
2391: Kaskan-----	75	Very limited		Very limited		Very limited	



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Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2395: Kisiwa-----	90	Flooding	1.00	Flooding	1.00	Too Sandy	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Too Sandy	1.00	Seepage	1.00		
		Seepage	1.00				
2509: Ladysmith-----	100	Very limited	1.00	Very limited	1.00	Very limited	1.00
		Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Sodium content	1.00			Seepage	1.00
2556: Langdon-----	50	Seepage	1.00	Somewhat limited	0.19	Sodium content	1.00
		Too Sandy	1.00	Depth to saturated zone	0.19	Too clayey	1.00
		Slope	0.00			Depth to saturated zone	0.47
2587: Imano-----	85	Somewhat limited	0.86	Very limited	1.00	Very limited	1.00
		Depth to saturated zone	0.50	Seepage	1.00	Too Sandy	1.00
				Slope	0.00	Seepage	1.00
						Slope	0.00
2588: Longford, Moderately Eroded-----	90	Very limited	1.00	Very limited	1.00	Very limited	1.00
		Too clayey	1.00	Flooding	1.00	Too Sandy	1.00
				Depth to saturated zone	1.00	Seepage	1.00
				Seepage	1.00	Depth to saturated zone	0.09
2812: Mahone-----	95	Too Sandy	1.00	Not limited		Too clayey	1.00
2948: Nalim-----	80	Very limited	1.00	Very limited	1.00	Somewhat limited	0.50
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	0.50
		Seepage	1.00	Flooding	0.40		
		Flooding	0.40				
2949: Naron, Moderately Eroded-----	85	Very limited	1.00	Not limited		Very limited	1.00
		Too clayey	0.50			Seepage	0.50
						Too clayey	0.50
2950: Naron, Moderately Eroded-----	85	Seepage	1.00	Not limited		Not limited	
		Slope	0.16				
				Somewhat limited		Somewhat limited	
				Slope	0.16	Slope	0.16
2951: Nash-----	90	Very limited	1.00	Very limited	1.00	Very limited	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage	1.00				
2952: Nash-----	60	Very limited	1.00	Very limited	1.00	Very limited	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage	1.00				
Lucien-----	30	Very limited	1.00	Very limited	1.00	Very limited	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage	1.00				
2953: Nash, Moderately Eroded-----	70	Very limited	1.00	Very limited	1.00	Very limited	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage	1.00	Slope	0.37	Slope	0.37
		Slope	0.37				
Lucien-----	20	Very limited	1.00	Very limited	1.00	Very limited	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage	1.00	Slope	0.63	Slope	0.63
		Slope	0.63				
2955: Nickerson-----	100	Very limited	1.00	Very limited	1.00	Very limited	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too Sandy	1.00



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Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2956: Nickerson-----	85	Seepage Too Sandy	1.00 1.00	Seepage	1.00	Seepage Depth to saturated zone	1.00 0.09
		Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Too Sandy	1.00
		Seepage Too Sandy	1.00 1.00	Seepage	1.00	Seepage Depth to saturated zone	1.00 0.09
2957: Nickerson-----	50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Too Sandy	1.00
		Seepage Too Sandy	1.00 1.00	Seepage	1.00	Seepage Depth to saturated zone	1.00 0.09
Punkin-----	50	Very limited Seepage Too Sandy	1.00 1.00	Not limited		Very limited Too Sandy	1.00
		Sodium content	1.00			Seepage Depth to saturated zone	1.00 1.00
2958: Ninnescah-----	85	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Seepage Depth to saturated zone	1.00 0.86
		Too Sandy	1.00	Seepage	1.00	Too Sandy	0.50
		Seepage	1.00				
2959: Ninnescah, saline---	100	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Too Sandy	1.00	Seepage	1.00	Too Sandy	0.50
3051: Ost-----	90	Not limited		Not limited		Not limited	
3052: Ost-----	55	Not limited		Not limited		Not limited	
Clark-----	45	Not limited		Not limited		Not limited	
3170: Penalosa-----	100	Somewhat limited Too clayey	0.50	Not limited		Very limited Hard to compact Too clayey	1.00 0.50
3171: Penalosa-----	100	Somewhat limited Too clayey	0.50	Not limited		Very limited Hard to compact Too clayey	1.00 0.50
3180: Pratt-----	85	Very limited Seepage Too Sandy	1.00 1.00	Very limited Seepage	1.00	Very limited Too Sandy Seepage	1.00 1.00
3181: Pratt-----	45	Very limited Seepage Too Sandy	1.00 1.00	Very limited Seepage	1.00	Very limited Too Sandy Seepage	1.00 1.00
Turon-----	30	Very limited Too Sandy	1.00	Very limited Seepage	1.00	Very limited Seepage Too Sandy	1.00 0.50
3190: Punkin-----	90	Very limited Sodium content Too clayey	1.00 0.50	Not limited		Very limited Sodium content Hard to compact Too clayey	1.00 1.00 0.50
3191: Punkin-----	70	Very limited Sodium content Too clayey	1.00 0.50	Not limited		Very limited Sodium content Hard to compact Too clayey	1.00 1.00 0.50
Taver-----	20	Somewhat limited Too clayey	0.50	Not limited		Very limited Hard to compact Too clayey	1.00 0.50
3403: Sand Pit-----	100	Not rated		Not rated		Not rated	
3469: Smolan-----	90	Somewhat limited Too clayey	0.50	Not limited		Somewhat limited Too clayey	0.50
3510: Saltcreek-----	50	Very limited Too clayey	1.00	Not limited		Very limited Too clayey	1.00



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Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Funmar-----	30	Somewhat limited Too clayey	0.50	Not limited		Hard to compact Very limited	1.00
Farnum-----	20	Not limited		Not limited		Hard to compact Too clayey	1.00 0.50
3511: Saltcreek-----	70	Very limited Too clayey	1.00	Not limited		Very limited Too clayey	1.00 1.00
Naron, sandy substratum-----	30	Very limited		Very limited		Hard to compact Somewhat limited	
3512: Saltcreek-----	50	Seepage	1.00	Seepage	1.00	Seepage	0.50
		Very limited Too clayey	1.00	Not limited		Very limited Too clayey	1.00
Naron-----	50	Very limited Seepage	1.00	Not limited		Hard to compact Not limited	1.00
3520: Saxman-----	85	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Too Sandy	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too Sandy	1.00	Flooding	0.40	Depth to saturated zone	0.47
		Flooding	0.40				
3530: Shellabarger, Eroded	45	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16
Albion-----	40	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Too Sandy	1.00
		Too Sandy	1.00	Slope	0.16	Seepage	1.00
		Slope	0.16			Slope	0.16
3531: Shellabarger, Moderately Eroded--	50	Not limited		Not limited		Not limited	
Nalim-----	50	Very limited Seepage	1.00	Not limited		Very limited Seepage	1.00
		Too clayey	0.50			Too clayey	0.50
3532: Shellabarger-----	80	Not limited		Not limited		Not limited	
3533: Shellabarger-----	85	Not limited		Not limited		Not limited	
3534: Shellabarger-----	85	Not limited		Not limited		Not limited	
3535: Shellabarger-----	55	Not limited		Not limited		Not limited	
Nalim-----	45	Very limited Seepage	1.00	Not limited		Very limited Seepage	1.00
		Too clayey	0.50			Too clayey	0.50
3540: Solvay-----	90	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Somewhat limited Seepage	0.50
		Seepage	1.00	Seepage	1.00	Depth to saturated zone	0.09
3550: Spelvin-----	100	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Seepage	1.00
3639: Taver-----	90	Somewhat limited Too clayey	0.50	Not limited		Very limited Hard to compact Too clayey	1.00 0.50
3640: Tivin-----	95	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Too Sandy	1.00
		Too Sandy	1.00	Slope	1.00	Seepage	1.00
		Slope	1.00			Slope	1.00
3641: Tivin-----	45	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Too Sandy	1.00
		Too Sandy	1.00	Slope	0.16	Seepage	1.00
		Slope	0.16			Slope	0.16
Dillhut-----	40	Very limited Seepage	1.00	Very limited Seepage	1.00	Not limited	
3642: Tivin-----	70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Too Sandy	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too Sandy	1.00				



SANITARY FACILITIES--Continued  
Reno County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Willowbrook, occasionally flooded-----	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Too Sandy	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Seepage	1.00	Seepage	1.00	Depth to saturated zone	0.09
		Too Sandy	1.00				
3643: Tobin-----	100	Very limited		Very limited		Not limited	
		Flooding	1.00	Flooding	1.00		
		Too clayey	0.50				
3644: Turon-----	65	Very limited		Very limited		Very limited	
		Too Sandy	1.00	Seepage	1.00	Seepage	1.00
						Too Sandy	0.50
Carway-----	20	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	0.50			Hard to compact	1.00
						Too clayey	0.50
3760: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Blazefork, Protected	25	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
		Too clayey	0.50				
Kaskan, Protected---	25	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too Sandy	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too Sandy	1.00				
3762: Urban Land-----	50	Not rated		Not rated		Not rated	
Darlow-----	25	Very limited		Not limited		Very limited	
		Sodium content	1.00			Sodium content	1.00
Elmer-----	15	Very limited		Not limited		Very limited	
		Sodium content	1.00			Sodium content	1.00
		Seepage	1.00			Seepage	0.16
3763: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Imano, Protected----	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too Sandy	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too Sandy	1.00			Depth to saturated zone	0.09
3764: Urban Land, Protected-----	60	Not rated		Not rated		Not rated	
Mahone, Protected---	35	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	0.50
		Seepage	1.00	Seepage	1.00		
3765: Urban Land-----	50	Not rated		Not rated		Not rated	
Saltcreek-----	35	Very limited		Not limited		Very limited	
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
Naron-----	15	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Seepage	1.00	Seepage	0.50
3766: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Saxman, Protected---	45	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too Sandy	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too Sandy	1.00			Depth to saturated zone	0.47



SANITARY FACILITIES--Continued  
Reno County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3767: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Willowbrook, Protected-----	45	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too Sandy	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too Sandy	1.00			Depth to saturated zone	0.09
3768: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Yaggy, Protected----	45	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too Sandy	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too Sandy	1.00			Gravel content	1.00
						Depth to saturated zone	0.09
3900: Warnut-----	75	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too Sandy	1.00	Seepage	1.00	Seepage	1.00
		Seepage	1.00			Too Sandy	0.50
3926: Water-----	100	Not rated		Not rated		Not rated	
3966: Willowbrook-----	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Too Sandy	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Seepage	1.00	Seepage	1.00	Depth to saturated zone	0.09
		Too Sandy	1.00				
4004: Yaggy-----	95	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Too Sandy	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Seepage	1.00	Seepage	1.00	Depth to saturated zone	0.09
		Too Sandy	1.00				
4005: Yaggy-----	60	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Too Sandy	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Seepage	1.00	Seepage	1.00	Depth to saturated zone	0.09
		Too Sandy	1.00				
Saxman-----	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too Sandy	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too Sandy	1.00	Flooding	0.40	Depth to saturated zone	0.47
		Flooding	0.40				
4110: Zellmont-----	70	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
Poxmash-----	30	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Too Sandy	1.00
		Too Sandy	1.00	Depth to bedrock	0.32	Seepage	1.00
						Depth to bedrock	0.32
						Gravel content	0.01



# AGRICULTURAL WASTE MANAGEMENT Reno County, Kansas

The nature of the soil is also important in the application of organic wastes and wastewater to land as fertilizers and irrigation; it is also important when the soil is used as a medium for treatment and disposal of these wastes. Favorable soil properties are required to prevent environmental damage.

The use of organic wastes and wastewater as production resources will result in energy conservation, prevent the waste of these important resources, and prevent problems associated with their disposal. Where disposal is the goal, and a maximum amount is disposed in a minimum area to hold costs to a minimum, risk of environmental damage is the principal constraint. Where the reuse goal is pursued, and a minimum amount is applied to a maximum area to obtain the greatest benefit, environmental damage is unlikely.

Interpretations developed for waste management may include ratings for (1) manure and food processing wastes; (2) municipal sewage sludge; (3) irrigation use of wastewater; or (4) treatment of wastewater by the slow rate process, overland flow process, or rapid infiltration process. If available, these should be located in this subsection.

Soil properties are important considerations in areas where soils are used as sites for the treatment and disposal of organic waste and wastewater. Selection of soils with properties that favor waste management can help to prevent environmental damage.

The Ag-Waste tables show the degree and kind of soil limitations affecting the treatment of agricultural waste, including municipal and food-processing wastewater and effluent from lagoons or storage ponds. Municipal wastewater is the waste stream from a municipality. It contains domestic waste and may contain industrial waste. It may have received primary or secondary treatment. It is rarely untreated sewage. Food-processing wastewater results from the preparation of fruits, vegetables, milk, cheese, and meats for public consumption. In places it is high in content of sodium and chloride. In the context of these tables, the effluent in lagoons and storage ponds is from facilities used to treat or store food-processing wastewater or domestic or animal waste. Domestic and food-processing wastewater is very dilute, and the effluent from the facilities that treat or store it commonly is very low in content of carbonaceous and nitrogenous material; the content of nitrogen commonly ranges from 10 to 30 milligrams per liter. The wastewater from animal waste treatment lagoons or storage ponds, however, has much higher concentrations of these materials, mainly because the manure has not been diluted as much as the domestic waste. The content of nitrogen in this wastewater generally ranges from 50 to 2,000 milligrams per liter. When wastewater is applied, checks should be made to ensure that nitrogen, phosphorus, heavy metals, and salts are not added in excessive amounts.

The ratings in the tables are for waste management systems that not only dispose of and treat organic waste or wastewater but also are beneficial to crops (application of manure and food-processing waste, application of sewage sludge, and disposal of wastewater by irrigation) and for waste management systems that are designed only for the purpose of wastewater disposal and treatment (overland flow of wastewater, rapid infiltration of wastewater, and slow rate treatment of wastewater).

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect agricultural waste management. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are generally favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Application of manure and food-processing waste not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. Manure is the excrement of livestock and poultry, and food-processing waste is damaged fruit and vegetables and the peelings, stems, leaves, pits, and soil particles removed in food preparation. The manure and food-processing waste are either solid, slurry, or liquid. Their nitrogen content varies. A high content of nitrogen limits the application rate. Toxic or otherwise dangerous wastes, such as those mixed with the lye used in food processing, are not considered in the ratings.

The ratings are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the waste is applied, and the method by which the waste is applied. The properties that affect absorption include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, and available water capacity. The properties that affect plant growth and microbial activity include reaction, the sodium adsorption ratio, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

Application of sewage sludge not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. In the context of this table, sewage sludge is the residual product of the treatment of municipal sewage. The solid component consists mainly of cell mass, primarily bacteria cells that developed during secondary treatment and have incorporated soluble organics into their own bodies. The sludge has small amounts of sand, silt, and other solid debris. The content of nitrogen varies. Some sludge has constituents that are toxic to plants or hazardous to the food chain, such as heavy metals and exotic organic compounds, and should be analyzed chemically prior to use.



AGRICULTURAL WASTE MANAGEMENT  
Reno County, Kansas

The content of water in the sludge ranges from about 98 percent to less than 40 percent. The sludge is considered liquid if it is more than about 90 percent water, slurry if it is about 50 to 90 percent water, and solid if it is less than about 50 percent water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the sludge is applied, and the method by which the sludge is applied. The properties that affect absorption, plant growth, and microbial activity include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, available water capacity, reaction, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of sludge. Permanently frozen soils are unsuitable for waste treatment.

Disposal of wastewater by irrigation not only disposes of municipal wastewater and wastewater from food-processing plants, lagoons, and storage ponds but also can improve crop production by increasing the amount of water available to crops. The ratings in the table are based on the soil properties that affect the design, construction, management, and performance of the irrigation system. The properties that affect design and management include the sodium adsorption ratio, depth to a water table, ponding, available water capacity, permeability, slope, and flooding. The properties that affect construction include stones, cobbles, depth to bedrock or a cemented pan, depth to a water table, and ponding.

The properties that affect performance include depth to bedrock or a cemented pan, bulk density, the sodium adsorption ratio, salinity, reaction, and the cation-exchange capacity, which is used to estimate the capacity of a soil to adsorb heavy metals. Permanently frozen soils are not suitable for disposal of wastewater by irrigation.

See the National Soil Handbook, September 1992, Part 620, for criteria used in rating soils for sanitary facilities and waste management.



AGRICULTURAL WASTE MANAGEMENT--Continued  
Reno County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
990: Abbyville-----	95	Very limited Sodium content Restricted permeability Depth to saturated zone Salinity	1.00 1.00 0.43 0.01	Very limited Sodium content Restricted permeability Depth to saturated zone	1.00 1.00 0.43	Very limited Sodium content Restricted permeability Depth to saturated zone	1.00 1.00 0.43
991: Abbyville, rarely flooded-----	45	Very limited  Sodium content Restricted permeability Depth to saturated zone Salinity  Filtering capacity	1.00 1.00 0.43 0.01 0.00	Very limited  Sodium content Restricted permeability Depth to saturated zone Flooding  Filtering capacity	1.00 1.00 0.43 0.40 0.00	Very limited  Sodium content Restricted permeability Depth to saturated zone Filtering capacity	1.00 1.00 0.43 0.00
Kisiwa, occasionally flooded-----	40	Very limited  Restricted permeability Ponding Depth to saturated zone Sodium content Filtering capacity	1.00 1.00 1.00 1.00 1.00	Very limited  Restricted permeability Ponding Depth to saturated zone Sodium content Flooding	1.00 1.00 1.00 1.00 1.00	Very limited  Restricted permeability Ponding Depth to saturated zone Sodium content Filtering capacity	1.00 1.00 1.00 1.00 1.00
1004: Albion-----	90	Very limited Filtering capacity Too acid	1.00 0.03	Very limited Filtering capacity Too acid	1.00 0.14	Very limited Filtering capacity Too acid	1.00 0.14
1011: Albion-----	70	Very limited Filtering capacity Too acid	1.00 0.03	Very limited Filtering capacity Too acid	1.00 0.14	Very limited Filtering capacity Too acid Too steep for surface application	1.00 0.14 0.00
Shellabarger-----	30	Somewhat limited Too acid Filtering capacity	0.11 0.00	Somewhat limited Too acid Filtering capacity	0.42 0.00	Somewhat limited Too acid Filtering capacity	0.42 0.00
1057: Aquents-----	100	Very limited Ponding Depth to saturated zone Filtering capacity Low adsorption Droughty	1.00 1.00 1.00 0.99 0.55	Very limited Ponding Depth to saturated zone Filtering capacity Droughty Too acid	1.00 1.00 1.00 0.55 0.42	Very limited Ponding Depth to saturated zone Filtering capacity Low adsorption Droughty	1.00 1.00 1.00 0.99 0.55
1061: Arents, Earthen Dam-----	100	Not rated		Not rated		Not rated	
1062: Arents, Landfill----	100	Very limited Slope Low adsorption	1.00 1.00	Very limited Low adsorption Slope	1.00 1.00	Very limited Low adsorption Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00
1070: Avans-----	100	Somewhat limited Too acid	0.37	Somewhat limited Too acid	0.96	Somewhat limited Too acid	0.96
1071: Avans-----	85	Somewhat limited Too acid	0.37	Somewhat limited Too acid	0.96	Somewhat limited Too acid	0.96
1072: Avans-----	85	Somewhat limited		Somewhat limited		Somewhat limited	



AGRICULTURAL WASTE MANAGEMENT--Continued  
Reno County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1191: Blazefork-----	90	Too acid	0.37	Too acid	0.96	Too acid Too steep for surface application	0.96 0.31
		Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
		Too acid Runoff limitation	0.50 0.40	Too acid Flooding	1.00 0.40	Too acid	1.00
1192: Blazefork-----	60	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
		Too acid Runoff limitation	0.50 0.40	Too acid Flooding	1.00 0.40	Too acid	1.00
		Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
Kaskan-----	40	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
		Sodium content Runoff limitation	1.00 0.40	Sodium content Flooding	1.00 0.40	Sodium content Too acid	1.00 0.31
1200: Buhler-----	65	Too acid Salinity	0.08 0.06	Too acid Salinity	0.31 0.13	Salinity	0.13
		Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
		Too acid Runoff limitation	0.50 0.40	Too acid Flooding	1.00 0.40	Too acid	1.00
Blazefork-----	30	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
		Too acid Runoff limitation	0.50 0.40	Too acid Flooding	1.00 0.40	Too acid	1.00
		Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
1324: Carway-----	50	Ponding Depth to saturated zone	1.00 1.00	Ponding Depth to saturated zone	1.00 1.00	Ponding Depth to saturated zone	1.00 1.00
		Runoff limitation Too acid	0.40 0.03	Too acid Filtering capacity	0.14 0.00	Too acid Filtering capacity	0.14 0.00
		Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
Carbika-----	30	Ponding Depth to saturated zone	1.00 1.00	Ponding Depth to saturated zone	1.00 1.00	Ponding Depth to saturated zone	1.00 1.00
		Runoff limitation Too acid	0.40 0.03	Too acid	0.14	Too acid	0.14
		Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
1357: Carway-----	40	Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Ponding Depth to saturated zone	1.00 1.00	Ponding Depth to saturated zone	1.00 1.00	Ponding Depth to saturated zone	1.00 1.00
		Runoff limitation Too acid	0.40 0.03	Too acid	0.14	Too acid	0.14
Dillhut-----	30	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Solvay-----	30	Too acid	0.00	Too acid	0.01	Too acid	0.01
		Very limited Depth to dense layer	1.00	Somewhat limited Depth to saturated zone	0.43	Somewhat limited Depth to saturated zone	0.43
		Depth to saturated zone Runoff limitation	0.43 0.40	Too acid Filtering capacity	0.03 0.00	Too acid Filtering capacity	0.03 0.00
		Too acid	0.01				



AGRICULTURAL WASTE MANAGEMENT--Continued  
Reno County, Kansas

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1359: Clark-----	70	Filtering capacity Not limited	0.00	Not limited		Somewhat limited Too steep for surface application	0.08
Ost-----	30	Somewhat limited Restricted permeability	0.30	Somewhat limited Restricted permeability	0.22	Somewhat limited Too steep for surface application Restricted permeability	0.31 0.22
1428: Crete-----	100	Very limited Restricted permeability Too acid	1.00 0.11	Very limited Restricted permeability Too acid	1.00 0.42	Very limited Restricted permeability Too acid	1.00 0.42
1429: Crete-----	100	Very limited Restricted permeability Too acid	1.00 0.11	Very limited Restricted permeability Too acid	1.00 0.42	Very limited Restricted permeability Too acid	1.00 0.42
1553: Darlow-----	70	Very limited Restricted permeability Sodium content Too acid Salinity	1.00 1.00 0.62 0.01	Very limited Restricted permeability Sodium content Too acid	1.00 1.00 1.00	Very limited Restricted permeability Sodium content Too acid	1.00 1.00 1.00
Elmer-----	20	Very limited Restricted permeability Depth to dense layer Too acid Sodium content Filtering capacity	1.00 1.00 1.00 0.68 0.32 0.00	Very limited Restricted permeability Too acid Sodium content Filtering capacity	1.00 1.00 0.32 0.00	Very limited Restricted permeability Too acid Sodium content Filtering capacity	1.00 1.00 0.32 0.00
1554: Dillhut-----	70	Very limited Filtering capacity Restricted permeability Depth to saturated zone Too acid	1.00 1.00 1.00 0.00	Very limited Filtering capacity Restricted permeability Depth to saturated zone Too acid	1.00 1.00 1.00 0.01	Very limited Filtering capacity Restricted permeability Depth to saturated zone Too acid	1.00 1.00 1.00 0.01
1555: Dillhut-----	35	Very limited Filtering capacity Too acid	1.00 0.00	Very limited Filtering capacity Too acid	1.00 0.01	Very limited Filtering capacity Too acid	1.00 0.01
Plev-----	35	Very limited Filtering capacity Depth to saturated zone Too acid Droughty	1.00 1.00 0.03 0.01	Very limited Filtering capacity Depth to saturated zone Too acid Droughty	1.00 1.00 0.14 0.01	Very limited Filtering capacity Depth to saturated zone Too acid Droughty	1.00 1.00 0.14 0.01
1556: Dillhut-----	30	Very limited Filtering capacity Too acid	1.00 0.00	Very limited Filtering capacity Too acid	1.00 0.01	Very limited Filtering capacity Too acid	1.00 0.01
Solvay-----	30	Very limited Depth to dense layer Depth to saturated zone Runoff limitation Too acid Filtering capacity	1.00 0.43 0.40 0.01 0.00	Somewhat limited Depth to saturated zone Too acid Filtering capacity	0.43 0.03 0.00	Somewhat limited Depth to saturated zone Too acid Filtering capacity	0.43 0.03 0.00
1725: Farnum-----	40	Somewhat limited		Somewhat limited		Somewhat limited	



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Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Funmar-----	40	Too acid Very limited Restricted permeability	0.00 1.00	Too acid Very limited Restricted permeability	0.01 1.00	Too acid Very limited Restricted permeability	0.01 1.00
1727: Funmar-----	55	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
Taver-----	45	Very limited Restricted permeability Runoff limitation	1.00 0.40	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
1804: Geary-----	100	Somewhat limited Too acid	0.03	Somewhat limited Too acid	0.14	Somewhat limited Too acid	0.14
1807: Geary, Moderately Eroded-----	100	Somewhat limited  Restricted permeability  Too acid	 0.24  0.03	Somewhat limited  Restricted permeability  Too acid	 0.18  0.14	Somewhat limited  Too steep for surface application Restricted permeability Too acid	 0.31  0.18 0.14
1985: Hayes-----	60	Very limited Restricted permeability Too acid Filtering capacity	1.00 0.02 0.00	Very limited Restricted permeability Too acid Filtering capacity	1.00 0.07 0.00	Very limited Restricted permeability Too acid Filtering capacity Too steep for surface application	1.00 0.07 0.00
1986: Hayes-----	55	Very limited Filtering capacity Restricted permeability Too acid	1.00 1.00 0.02	Very limited Filtering capacity Restricted permeability Too acid	1.00 1.00 0.07	Very limited Filtering capacity Restricted permeability Too acid Too steep for surface application	1.00 1.00 0.07 0.00
Solvay-----	20	Very limited Depth to dense layer Depth to saturated zone Runoff limitation  Too acid Filtering capacity	1.00 0.43 0.40  0.01 0.00	Somewhat limited Depth to saturated zone Too acid  Filtering capacity	0.43 0.03  0.00	Somewhat limited Depth to saturated zone Too acid  Filtering capacity	0.43 0.03  0.00
1987: Hayes-----	40	Very limited Filtering capacity Restricted permeability Too acid	1.00 1.00 0.02	Very limited Filtering capacity Restricted permeability Too acid	1.00 1.00 0.07	Very limited Filtering capacity Restricted permeability Too acid Too steep for surface application	1.00 1.00 0.07 0.00
Turon-----	35	Very limited Filtering capacity Restricted permeability Leaching limitation Too acid	1.00 0.89 0.45 0.05	Very limited Filtering capacity Restricted permeability Too acid	1.00 0.78 0.21	Very limited Filtering capacity Restricted permeability Too acid  Too steep for surface application	1.00 0.78 0.21  0.00
2204: Jamash-----	50	Very limited Restricted permeability	1.00	Very limited Droughty	1.00	Very limited Droughty	1.00



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Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Piedmont-----	50	Depth to bedrock	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Droughty	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Runoff limitation	0.40				
		Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
2205: Jamash-----	60	Runoff limitation	0.40	Depth to bedrock	0.29	Depth to bedrock	0.29
		Depth to bedrock	0.29	Droughty	0.05	Droughty	0.05
		Droughty	0.05				
		Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Droughty	1.00	Droughty	1.00
Piedmont-----	40	Depth to bedrock	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Droughty	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Runoff limitation	0.40				
		Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
2206: Jamash-----	60	Runoff limitation	0.40	Depth to bedrock	0.29	Depth to bedrock	0.29
		Depth to bedrock	0.29	Droughty	0.05	Droughty	0.05
		Droughty	0.05				
		Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Droughty	1.00	Droughty	1.00
Piedmont-----	40	Depth to bedrock	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Droughty	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Runoff limitation	0.40				
		Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
2207: Jamash-----	80	Runoff limitation	0.40	Depth to bedrock	0.29	Depth to bedrock	0.66
		Depth to bedrock	0.29	Droughty	0.05	Too steep for surface application	0.00
		Droughty	0.05			Too steep for sprinkler application	
		Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
2381: Kanza-----	50	Runoff limitation	0.40	Depth to bedrock	1.00	Too steep for surface application	0.31
		Depth to bedrock	1.00				
		Droughty	1.00				
		Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Droughty	1.00	Droughty	1.00
Ninnescah-----	50	Depth to bedrock	1.00	Restricted permeability	1.00	Depth to bedrock	1.00
		Droughty	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Runoff limitation	0.40				
		Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Droughty	1.00	Droughty	1.00
2390: Kaskan-----	85	Runoff limitation	0.40	Depth to bedrock	1.00	Too steep for surface application	0.14
		Depth to bedrock	1.00				
		Droughty	1.00				
		Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Droughty	1.00	Droughty	1.00



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Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2391: Kaskan-----	75	Very limited Flooding Filtering capacity Restricted permeability	1.00 1.00 0.30	Flooding Very limited Flooding Filtering capacity Restricted permeability	0.40 1.00 1.00 0.22	Very limited Flooding Filtering capacity Restricted permeability	1.00 1.00 0.22
2395: Kisiwa-----	90	Very limited Restricted permeability Ponding Depth to saturated zone Sodium content Filtering capacity	1.00 1.00 1.00 1.00 1.00	Very limited Restricted permeability Ponding Depth to saturated zone Sodium content Filtering capacity	1.00 1.00 1.00 1.00 1.00	Very limited Restricted permeability Ponding Depth to saturated zone Sodium content Filtering capacity	1.00 1.00 1.00 1.00
2509: Ladysmith-----	100	Very limited Restricted permeability Depth to saturated zone Runoff limitation	1.00 0.86 0.40	Very limited Restricted permeability Depth to saturated zone	1.00 0.86	Very limited Restricted permeability Depth to saturated zone	1.00 0.86
2556: Langdon-----	50	Very limited Filtering capacity Droughty  Leaching limitation Too acid Slope	1.00 0.62 0.45 0.18 0.00	Very limited Filtering capacity Too acid  Droughty Slope	1.00 0.67 0.62 0.00	Very limited Filtering capacity Too steep for surface application Too acid Droughty Too steep for sprinkler application	1.00 1.00 0.67 0.62 0.10
2587: Imano-----	85	Very limited Filtering capacity Flooding  Depth to saturated zone Restricted permeability	1.00 0.60 0.43 0.30	Very limited Flooding Filtering capacity Depth to saturated zone Restricted permeability	1.00 1.00 0.43 0.22	Very limited Filtering capacity Flooding Depth to saturated zone Restricted permeability	1.00 0.60 0.43 0.22
2588: Longford, Moderately Eroded-----	90	Somewhat limited  Restricted permeability	0.89	Somewhat limited  Restricted permeability	0.78	Somewhat limited  Restricted permeability Too steep for surface application	0.78 0.08
2812: Mahone-----	95	Very limited Filtering capacity Too acid	1.00 0.43	Very limited Filtering capacity Too acid Flooding	1.00 0.99 0.40	Very limited Filtering capacity Too acid	1.00 0.99
2948: Nalim-----	80	Somewhat limited Restricted permeability Too acid Filtering capacity	0.30 0.00 0.00	Somewhat limited Restricted permeability Too acid Filtering capacity	0.22 0.01 0.00	Somewhat limited Restricted permeability Too acid Filtering capacity	0.22 0.01 0.00
2949: Naron, Moderately Eroded-----	85	Somewhat limited  Filtering capacity	0.00	Somewhat limited  Filtering capacity	0.00	Somewhat limited  Too steep for surface application Filtering capacity	0.08 0.00



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Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2950: Naron, Moderately Eroded-----	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Too steep for surface application	1.00
		Filtering capacity	0.00	Filtering capacity	0.00	Too steep for sprinkler application	0.39
						Filtering capacity	0.00
2951: Nash-----	90	Very limited		Somewhat limited		Somewhat limited	
		Depth to dense layer	1.00	Depth to bedrock	0.65	Depth to bedrock	0.65
		Depth to bedrock	0.65	Droughty	0.08	Droughty	0.08
		Droughty	0.08				
2952: Nash-----	60	Very limited		Somewhat limited		Somewhat limited	
		Depth to dense layer	1.00	Depth to bedrock	0.65	Depth to bedrock	0.65
		Depth to bedrock	0.65	Droughty	0.08	Too steep for surface application	0.31
		Droughty	0.08			Droughty	0.08
Lucien-----	30	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Droughty	1.00	Droughty	1.00
		Droughty	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Low adsorption	0.10			Too steep for surface application	0.66
						Low adsorption	0.10
						Too steep for sprinkler application	0.00
2953: Nash, Moderately Eroded-----	70	Very limited		Somewhat limited		Very limited	
		Depth to dense layer	1.00	Depth to bedrock	0.65	Too steep for surface application	1.00
		Depth to bedrock	0.65	Slope	0.37	Depth to bedrock	0.65
		Slope	0.37	Droughty	0.08	Too steep for sprinkler application	0.59
		Droughty	0.08			Droughty	0.08
Lucien-----	20	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Droughty	1.00	Droughty	1.00
		Droughty	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	0.63	Slope	0.63	Too steep for surface application	1.00
		Low adsorption	0.10			Too steep for sprinkler application	0.77
						Low adsorption	0.10
2955: Nickerson-----	100	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Depth to saturated zone	0.43	Depth to saturated zone	0.43	Depth to saturated zone	0.43
2956: Nickerson-----	85	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Depth to saturated zone	0.43	Depth to saturated zone	0.43	Depth to saturated zone	0.43
2957: Nickerson-----	50	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Depth to saturated zone	0.43	Depth to saturated zone	0.43	Depth to saturated zone	0.43
Punkin-----	50	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Sodium content	1.00	Sodium content	1.00	Sodium content	1.00



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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2958: Ninnescah-----	85	Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Runoff limitation	0.40				
		Very limited Depth to saturated zone	1.00	Very limited Flooding	1.00	Very limited Depth to saturated zone	1.00
		Flooding	0.60	Depth to saturated zone	1.00	Flooding	0.60
2959: Ninnescah, saline---	100	Filtering capacity	0.00	Filtering capacity	0.00	Filtering capacity	0.00
		Very limited Depth to saturated zone	1.00	Very limited Flooding	1.00	Very limited Depth to saturated zone	1.00
		Flooding	0.60	Depth to saturated zone	1.00	Flooding	0.60
		Salinity	0.06	Salinity	0.50	Salinity	0.50
3051: Ost-----	90	Filtering capacity	0.00	Filtering capacity	0.00	Filtering capacity	0.00
		Somewhat limited Restricted permeability	0.30	Somewhat limited Restricted permeability	0.22	Somewhat limited Restricted permeability	0.22
3052: Ost-----	55	Somewhat limited Restricted permeability	0.30	Somewhat limited Restricted permeability	0.22	Somewhat limited Restricted permeability	0.22
		Not limited		Not limited		Not limited	
Clark- 3170: Penalosa-----	45	Not limited		Not limited		Not limited	
		Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
3171: Penalosa-----	100	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
		Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
3180: Pratt-----	85	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Low adsorption	1.00	Too acid	0.42	Low adsorption	1.00
		Leaching limitation	0.45			Too steep for surface application	0.91
		Too acid	0.11			Too acid	0.42
3181: Pratt-----	45	Too steep for sprinkler application				Too steep for sprinkler application	0.02
		Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Low adsorption	1.00	Too acid	0.42	Low adsorption	1.00
		Leaching limitation	0.45			Too acid	0.42
Turon-----	30	Too acid	0.11			Too steep for surface application	0.00
		Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Restricted permeability	0.89	Restricted permeability	0.78	Restricted permeability	0.78
		Leaching limitation	0.45	Too acid	0.21	Too acid	0.21
3190: Punkin-----	90	Too acid	0.05			Too steep for surface application	0.00
		Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
		Sodium content	1.00	Sodium content	1.00	Sodium content	1.00
		Runoff limitation	0.40				
3191: Punkin-----	70	Very limited		Very limited		Very limited	



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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Taver-----	20	Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Sodium content	1.00	Sodium content	1.00	Sodium content	1.00
		Runoff limitation	0.40				
		Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
3403: Sand Pit-----	100	Runoff limitation	0.40				
		Not rated		Not rated		Not rated	
3469: Smolan-----	90	Not rated		Not rated		Not rated	
		Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
3510: Saltcreek-----	50	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
		Too acid	0.73	Too acid	1.00	Too acid	1.00
		Filtering capacity	0.00	Filtering capacity	0.00	Filtering capacity	0.00
Funmar-----	30	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
Farnum-----	20	Somewhat limited Too acid	0.00	Somewhat limited Too acid	0.01	Somewhat limited Too acid	0.01
3511: Saltcreek-----	70	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
		Too acid	0.73	Too acid	1.00	Too acid	1.00
		Filtering capacity	0.00	Filtering capacity	0.00	Filtering capacity	0.00
Naron, sandy substratum-----	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Filtering capacity	0.00	Filtering capacity	0.00	Filtering capacity	0.00
3512: Saltcreek-----	50	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
		Too acid	0.73	Too acid	1.00	Too acid	1.00
		Filtering capacity	0.00	Filtering capacity	0.00	Filtering capacity	0.00
Naron-----	50	Somewhat limited		Somewhat limited		Somewhat limited	
		Filtering capacity	0.00	Filtering capacity	0.00	Filtering capacity	0.00
3520: Saxman-----	85	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Depth to saturated zone	0.86	Too acid	1.00	Too acid	1.00
		Too acid	0.62	Depth to saturated zone	0.86	Depth to saturated zone	0.86
		Leaching limitation	0.45	Flooding	0.40	Droughty	0.11
		Droughty	0.11	Droughty	0.11		
3530: Shellabarger, Eroded	45	Somewhat limited Slope	0.16	Somewhat limited Too acid	0.42	Very limited Too steep for surface application	1.00
		Too acid	0.11	Slope	0.16	Too acid	0.42
		Filtering capacity	0.00	Filtering capacity	0.00	Too steep for sprinkler application	0.39
						Filtering capacity	0.00
Albion-----	40	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Too steep for surface application	1.00
		Slope	0.16	Slope	0.16	Filtering capacity	1.00



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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3531: Shellabarger, Moderately Eroded--	50	Too acid	0.03	Too acid	0.14	Too steep for sprinkler application Too acid	0.39 0.14
		Somewhat limited		Somewhat limited		Somewhat limited	
		Too acid Filtering capacity	0.11 0.00	Too acid Filtering capacity	0.42 0.00	Too acid Too steep for surface application Filtering capacity	0.42 0.08 0.00
Nalim-----	50	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability Too acid	0.30 0.00	Restricted permeability Too acid	0.22 0.01	Restricted permeability Too steep for surface application Too acid	0.22 0.08 0.01
		Filtering capacity	0.00	Filtering capacity	0.00	Filtering capacity	0.00
3532: Shellabarger-----	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Too acid Filtering capacity	0.11 0.00	Too acid Filtering capacity	0.42 0.00	Too acid Filtering capacity	0.42 0.00
3533: Shellabarger-----	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too acid Filtering capacity	0.11 0.00	Too acid Filtering capacity	0.42 0.00	Too acid Filtering capacity	0.42 0.00
3534: Shellabarger-----	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too acid Filtering capacity	0.11 0.00	Too acid Filtering capacity	0.42 0.00	Too acid Filtering capacity	0.42 0.00
3535: Shellabarger-----	55	Somewhat limited		Somewhat limited		Somewhat limited	
		Too acid Filtering capacity	0.11 0.00	Too acid Filtering capacity	0.42 0.00	Too acid Filtering capacity	0.42 0.00
Nalim-----	45	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability Too acid Filtering capacity	0.30 0.00 0.00	Restricted permeability Too acid Filtering capacity	0.22 0.01 0.00	Restricted permeability Too acid Filtering capacity	0.22 0.01 0.00
3540: Solvay-----	90	Very limited		Somewhat limited		Somewhat limited	
		Depth to dense layer	1.00	Depth to saturated zone	0.43	Depth to saturated zone	0.43
		Depth to saturated zone	0.43	Too acid	0.03	Too acid	0.03
		Runoff limitation	0.40	Filtering capacity	0.00	Filtering capacity	0.00
3550: Spelvin-----	100	Too acid Filtering capacity	0.01 0.00				
3639: Taver-----	90	Very limited		Very limited		Very limited	
		Filtering capacity Too acid	1.00 0.18	Filtering capacity Too acid	1.00 0.67	Filtering capacity Too acid	1.00 0.67
3640: Tivin-----	95	Very limited		Very limited		Very limited	
		Restricted permeability Runoff limitation	1.00 0.40	Restricted permeability	1.00	Restricted permeability	1.00
		Very limited		Very limited		Very limited	
		Filtering capacity Slope	1.00 1.00	Filtering capacity Slope	1.00 1.00	Filtering capacity Too steep for surface application	1.00 1.00



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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3641: Tivin-----	45	Droughty	0.64	Droughty	0.64	Too steep for sprinkler application	1.00
		Leaching limitation	0.45	Too acid	0.01	Droughty	0.64
		Too acid	0.00			Too acid	0.01
		Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Droughty	0.64	Droughty	0.64	Too steep for surface application	1.00
		Leaching limitation	0.45	Slope	0.16	Droughty	0.64
		Slope	0.16	Too acid	0.01	Too steep for sprinkler application	0.39
		Too acid	0.00			Too acid	0.01
		Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Too acid	0.00	Too acid	0.01	Too acid	0.01
3642: Tivin-----	70	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Too steep for surface application	0.00
		Leaching limitation	0.45	Too acid	0.14	Too steep for surface application	0.66
		Droughty	0.05	Droughty	0.05	Too acid	0.14
		Too acid	0.03			Droughty	0.05
						Too steep for sprinkler application	0.00
		Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Depth to dense layer	1.00	Flooding	1.00	Flooding	0.60
		Flooding	0.60	Depth to saturated zone	0.43	Depth to saturated zone	0.43
		Depth to saturated zone	0.43	Too acid	0.03	Too acid	0.03
3643: Tobin-----	100	Too acid	0.01				
		Somewhat limited Flooding	0.60	Very limited Flooding	1.00	Somewhat limited Flooding	0.60
		Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Restricted permeability	0.89	Restricted permeability	0.78	Restricted permeability	0.78
		Leaching limitation	0.45	Too acid	0.21	Too acid	0.21
		Too acid	0.05			Too steep for surface application	0.08
		Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
3644: Turon-----	65	Runoff limitation	0.40	Too acid	0.14	Too acid	0.14
3760: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	



AGRICULTURAL WASTE MANAGEMENT--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Blazefork, Protected	25	Very limited Restricted permeability Too acid Runoff limitation	1.00 0.50 0.40	Very limited Restricted permeability Too acid	1.00 1.00	Very limited Restricted permeability Too acid	1.00 1.00
Kaskan, Protected---	25	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
3762: Urban Land-----	50	Not rated		Not rated		Not rated	
Darlow-----	25	Very limited Restricted permeability Sodium content Too acid Salinity	1.00 1.00 0.62 0.01	Very limited Restricted permeability Sodium content Too acid	1.00 1.00 1.00	Very limited Restricted permeability Sodium content Too acid	1.00 1.00 1.00
Elmer-----	15	Very limited Restricted permeability Depth to dense layer Too acid Sodium content  Filtering capacity	1.00 1.00 1.00 0.68 0.32 0.00	Very limited Restricted permeability Too acid  Sodium content Filtering capacity	1.00 1.00 1.00 0.32 0.00	Very limited Restricted permeability Too acid  Sodium content Filtering capacity	1.00 1.00 1.00 0.32 0.00
3763: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Imano, Protected----	40	Very limited Filtering capacity Depth to saturated zone Restricted permeability	1.00 0.43 0.30	Very limited Filtering capacity Depth to saturated zone Restricted permeability	1.00 0.43 0.22	Very limited Filtering capacity Depth to saturated zone Restricted permeability	1.00 0.43 0.22
3764: Urban Land, Protected-----	60	Not rated		Not rated		Not rated	
Mahone, Protected---	35	Very limited Filtering capacity Too acid	1.00 0.43	Very limited Filtering capacity Too acid	1.00 0.99	Very limited Filtering capacity Too acid	1.00 0.99
3765: Urban Land-----	50	Not rated		Not rated		Not rated	
Saltcreek-----	35	Very limited Restricted permeability Too acid Filtering capacity	1.00 0.73 0.00	Very limited Restricted permeability Too acid Filtering capacity	1.00 1.00 0.00	Very limited Restricted permeability Too acid Filtering capacity	1.00 1.00 0.00
Naron-----	15	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00
3766: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Saxman, Protected---	45	Very limited Filtering capacity Depth to saturated zone	1.00 0.86	Very limited Filtering capacity Too acid	1.00 1.00	Very limited Filtering capacity Too acid	1.00 1.00



AGRICULTURAL WASTE MANAGEMENT--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3767: Urban Land, Protected-----	50	Too acid	0.62	Depth to saturated zone Droughty	0.86	Depth to saturated zone Droughty	0.86
		Leaching limitation Droughty	0.45		0.11		0.11
		Not rated					
Willowbrook, Protected-----	45	Very limited		Very limited		Very limited	
		Filtering capacity	1.00		1.00		1.00
		Depth to dense layer	1.00		0.43		0.43
		Depth to saturated zone Too acid	0.43		0.03		0.03
3768: Urban Land, Protected-----	50	Not rated		Not rated		Not rated	
Yaggy, Protected----	45	Very limited		Very limited		Very limited	
		Filtering capacity	1.00		1.00		1.00
		Depth to saturated zone Droughty	0.43		0.43		0.43
3900: Walnut-----	75	Depth to saturated zone Droughty	0.07	Depth to saturated zone Droughty	0.07	Depth to saturated zone Droughty	0.07
		Very limited					
		Ponding	1.00		1.00		1.00
		Depth to saturated zone	1.00		1.00		1.00
3926: Water-----	100	Runoff limitation Too acid	0.40	Too acid	0.67	Too acid	0.67
		Filtering capacity	0.18		0.00		0.00
		Filtering capacity	0.00				
		Not rated					
3966: Willowbrook-----	90	Not rated		Not rated		Not rated	
		Very limited					
		Filtering capacity	1.00		1.00		1.00
		Depth to dense layer Flooding	1.00		1.00		0.60
4004: Yaggy-----	95	Depth to saturated zone Too acid	0.60	Depth to saturated zone Too acid	0.43	Depth to saturated zone Too acid	0.43
		Depth to saturated zone Too acid	0.43		0.03		0.03
		Very limited					
		Filtering capacity	1.00		1.00		1.00
4005: Yaggy-----	60	Flooding	0.60	Flooding	1.00	Flooding	0.60
		Depth to saturated zone Droughty	0.43		0.43		0.43
		Depth to saturated zone Droughty	0.07		0.07		0.07
		Very limited					
Saxman-----	30	Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Flooding	0.60		1.00		0.60
		Depth to saturated zone Droughty	0.43		0.43		0.43
		Depth to saturated zone Droughty	0.07		0.07		0.07



AGRICULTURAL WASTE MANAGEMENT--Continued  
Reno County, Kansas

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Map symbol and soil name	Pct of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
4110: Zellmont-----	70	Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Depth to saturated zone	0.86	Too acid	1.00	Too acid	1.00
		Too acid	0.62	Depth to saturated zone	0.86	Depth to saturated zone	0.86
		Leaching limitation	0.45	Flooding	0.40	Droughty	0.11
		Droughty	0.11	Droughty	0.11		
		Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.30	Too acid	0.31	Too acid	0.31
		Depth to bedrock	0.29	Depth to bedrock	0.29	Depth to bedrock	0.29
		Droughty	0.22	Restricted permeability	0.22	Restricted permeability	0.22
		Too acid	0.08	Droughty	0.22	Droughty	0.22
Poxmash-----	30	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Droughty	0.21	Too acid	0.67	Too acid	0.67
		Too acid	0.18	Droughty	0.21	Droughty	0.21



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Soils Data Table: SOIL\_KS Sort Order: MUSYM

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							SPISP II Ratings		
							Leaching	Solution	Adsorbed
MUSYM/SEQ#	COMPONENT/TEXTURE/MU%	HYD	KFACT	SURFACE DEPTH	% OM	(SLP)	Runoff (SSRP)	Runoff (SARP)	
1004 1	ALBION SL 90%	B	0.20	9"	1.5%	H	I	I	
1011 1	ALBION SL 70%	B	0.20	9"	1.5%	H	I	I	
1011 2	SHELLABARGER SL 30%	B	0.20	7"	1.5%	H	I	I	
1057 1	AQUENTS SICL 100%	D	0.37	3"	2.0%	H (w)	H	H	
1061 1	ARENTS, EARTHEN DAM 100%		0.00	0"	0.0%	?	?	?	
1062 1	ARENTS, LANDFILL 100%		0.00	0"	0.0%	?	?	?	
1070 1	AVANS L 100%	B	0.37	5"	2.0%	I	I	I	
1071 1	AVANS L 85%	B	0.37	5"	2.0%	I	I	I	
1072 1	AVANS L 85%	B	0.37	5"	2.0%	I	I	I	
1191 1	BLAZEFORK SICL 90%	D	0.37	3"	3.0%	V	H	H	
1192 1	BLAZEFORK SICL 60%	D	0.37	3"	3.0%	V	H	H	
1192 2	KASKAN L 40%	B	0.28	7"	3.0%	I	I	I	
1200 1	BUHLER SICL 65%	D	0.43	3"	4.0%	V	H	H	
1200 2	BLAZEFORK SICL 30%	D	0.37	3"	3.0%	V	H	H	
1324 1	CARWAY FSL 50%	D	0.20	7"	0.8%	V	H	H	
1324 2	CARBIKA SIL 30%	D	0.24	11"	1.5%	V	H	H	
1357 1	CARWAY LFS 40%	D	0.17	7"	0.8%	V	H	H	
1357 2	DILLHUT FS 30%	B	0.15	10"	0.5%	H (w)	I	I	
1357 3	SOLVAY LFS 30%	D	0.17	5"	1.3%	H (w)	H	H	
1359 1	CLARK L 70%	B	0.28	11"	1.5%	I	I	I	
1359 2	OST L 30%	B	0.28	8"	2.0%	I	I	I	
1428 1	CRETE SIL 100%	C	0.37	5"	3.0%	L	H	H	
1429 1	CRETE SIL 100%	C	0.37	5"	3.0%	L	H	H	
1553 1	DARLOW L 70%	C	0.43	5"	2.0%	L	H	H	
1553 2	ELMER FSL 20%	C	0.32	6"	1.5%	L	H	H	
1554 1	DILLHUT FS 70%	B	0.15	10"	0.5%	H (w)	I	I	
1555 1	DILLHUT FS 35%	B	0.15	4"	0.5%	H	I	I	



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1555	2	PLEV LFS 35%	B	0.17	4"	0.5% H (w)	I	I
1556	1	DILLHUT FS 30%	B	0.15	4"	0.5% H	I	I
1556	2	SOLVAY FSL 30%	D	0.20	5"	1.3% H (w)	H	H
1725	1	FARNUM L 40%	B	0.28	5"	2.0% I	I	I
1725	2	FUNMAR L 40%	C	0.28	6"	2.0% L	H	H
1727	1	FUNMAR L 55%	C	0.28	6"	2.0% L	H	H
1727	2	TAVER L 45%	D	0.28	7"	2.0% V	H	H
1804	1	GEARY SIL 100%	B	0.32	6"	2.5% I	I	I
1807	1	GEARY SICL 100%	B	0.37	5"	1.5% H	I	I
1985	1	HAYES FSL 60%	B	0.20	8"	0.8% H	I	I
1986	1	HAYES LFS 55%	B	0.17	8"	0.8% H	I	I
1986	2	SOLVAY LFS 20%	D	0.17	5"	0.8% H (w)	H	H
1987	1	HAYES LFS 40%	B	0.17	8"	0.8% H	I	I
1987	2	TURON FS 35%	A	0.15	8"	0.5% H	L	L
2204	1	JAMASH CL 50%	D	0.37	4"	2.0% V	H	H
2204	2	PIEDMONT CL 50%	D	0.37	4"	2.0% V	H	H
2205	1	JAMASH CL 60%	D	0.37	4"	2.0% V	H	H
2205	2	PIEDMONT CL 40%	D	0.37	4"	2.0% V	H	H
2206	1	JAMASH CL 60%	D	0.37	4"	2.0% V	H	H
2206	2	PIEDMONT CL 40%	D	0.37	4"	2.0% V	H	H
2207	1	JAMASH CL 80%	D	0.37	4"	2.0% V	H	H
2381	1	KANZA SL 50%	D	0.20	4"	2.0% H (w)	H	H
2381	2	NINNESCAH SL 50%	B	0.20	6"	2.5% H (w)	I	I
2390	1	KASKAN L 85%	B	0.28	7"	3.0% I	I	I
2391	1	KASKAN SICL 75%	B	0.37	9"	3.0% I	I	I
2395	1	KISIWA L 90%	D	0.43	4"	2.5% H (w)	H	H
2509	1	LADYSMITH SICL 100%	D	0.37	8"	3.0% V	H	H
2556	1	LANGDON FS 50%	A	0.15	8"	0.5% H	L	L
2587	1	IMANO CL 85%	C	0.28	10"	2.0% H (w)	H	H
2588	1	LONGFORD SICL 90%	C	0.37	6"	1.5% L	H	H



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2812	1	MAHONE LFS 95%	C	0.17	8"	0.4% I	H	I
2948	1	NALIM L 80%	B	0.28	6"	2.0% I	I	I
2949	1	NARON FSL 85%	B	0.20	8"	0.5% H	I	I
2950	1	NARON FSL 85%	B	0.20	8"	0.5% H	I	I
2951	1	NASH SIL 90%	B	0.37	8"	2.0% I	I	I
2952	1	NASH SIL 60%	B	0.37	8"	2.0% I	I	I
2952	2	LUCIEN SIL 30%	C	0.37	6"	1.0% L	H	H
2953	1	NASH SIL 70%	B	0.37	8"	1.0% H	I	I
2953	2	LUCIEN SIL 20%	C	0.37	6"	1.0% L	H	H
2955	1	NICKERSON FSL 100%	B	0.17	6"	0.4% H (w)	I	I
2956	1	NICKERSON LFS 85%	B	0.15	6"	0.4% H (w)	I	I
2957	1	NICKERSON FSL 50%	B	0.17	6"	0.4% H (w)	I	I
2957	2	PUNKIN FSL 50%	D	0.32	6"	2.0% V	H	H
2958	1	NINNESCAH FSL 85%	B	0.20	6"	2.5% H (w)	I	I
2959	1	NINNESCAH FSL 100%	B	0.28	6"	2.5% H (w)	I	I
3051	1	OST L 90%	B	0.28	8"	2.0% I	I	I
3052	1	OST L 55%	B	0.28	8"	2.0% I	I	I
3052	2	CLARK L 45%	B	0.28	11"	1.5% I	I	I
3170	1	PENALOSA SIL 100%	C	0.37	5"	2.0% L	H	H
3171	1	PENALOSA SIL 100%	C	0.37	5"	2.0% L	H	H
3180	1	PRATT FS 85%	A	0.15	8"	0.8% H	L	L
3181	1	PRATT FS 45%	A	0.15	8"	0.8% H	L	L
3181	2	TURON FS 30%	A	0.15	8"	0.5% H	L	L
3190	1	PUNKIN SIL 90%	D	0.43	4"	2.0% V	H	H
3191	1	PUNKIN SIL 70%	D	0.43	4"	2.0% V	H	H
3191	2	TAVER L 20%	D	0.28	7"	2.0% V	H	H
3403	1	SAND PIT 100%		0.00	0"	0.0% ?	?	?
3469	1	SMOLAN SICL 90%	C	0.37	5"	3.0% L	H	H
3510	1	SALTCREEK FSL 50%	C	0.20	5"	1.5% I	H	I
3510	2	FUNMAR L 30%	C	0.28	6"	2.0% L	H	H



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3510	3	FARNUM L 20%	B	0.28	5"	2.0% I	I	I
3511	1	SALTCREEK FSL 70%	C	0.20	5"	1.5% I	H	I
3511	2	NARON FSL 30%	B	0.20	7"	2.0% H	I	I
3512	1	NARON FSL 50%	B	0.20	8"	2.0% I	I	I
3512	2	SALTCREEK FSL 50%	C	0.20	5"	1.5% I	H	I
3520	1	SAXMAN LS 85%	A	0.20	4"	0.7% H (w)	L	L
3530	1	SHELLABARGER SL 45%	B	0.20	5"	0.8% H	I	I
3530	2	ALBION SL 40%	B	0.20	9"	1.5% H	I	I
3531	1	NALIM L 50%	B	0.28	6"	2.0% I	I	I
3531	2	SHELLABARGER SL 50%	B	0.20	6"	0.7% H	I	I
3532	1	SHELLABARGER LS 80%	B	0.17	6"	1.3% H	I	I
3533	1	SHELLABARGER SL 85%	B	0.20	7"	1.5% H	I	I
3534	1	SHELLABARGER SL 85%	B	0.20	7"	1.5% H	I	I
3535	1	SHELLABARGER SL 55%	B	0.20	7"	1.5% H	I	I
3535	2	NALIM L 45%	B	0.28	6"	2.0% I	I	I
3540	1	SOLVAY LFS 90%	D	0.17	5"	0.8% H (w)	H	H
3550	1	SPELVIN LS 100%	B	0.15	5"	0.5% H	I	I
3639	1	TAVER L 90%	D	0.28	7"	2.0% V	H	H
3640	1	TIVIN FS 95%	A	0.15	7"	0.5% H	L	I (s)
3641	1	TIVIN FS 45%	A	0.15	7"	0.5% H	L	L
3641	2	DILLHUT FS 40%	B	0.15	4"	0.5% H	I	I
3642	1	TIVIN FS 70%	A	0.15	11"	0.5% H	L	L
3642	2	WILLOWBROOK FSL 30%	B	0.20	4"	1.5% H (w)	I	I
3643	1	TOBIN SIL 100%	B	0.32	6"	2.5% I	I	I
3644	1	TURON FS 65%	A	0.15	8"	0.5% H	L	L
3644	2	CARWAY LFS 20%	D	0.17	7"	0.8% V	H	H
3760	1	URBAN LAND 50%	D	0.00	0"	0.0% V	H	L
3760	2	BLAZEFORK SICL 25%	D	0.37	3"	3.0% V	H	H
3760	3	KASKAN L 25%	B	0.28	7"	3.0% I	I	I
3762	1	URBAN LAND 50%	D	0.00	0"	0.0% V	H	L



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3762 2	DARLOW L 25%	C	0.43	5"	2.0% L	H	H
3762 3	ELMER FSL 15%	C	0.32	6"	1.5% L	H	H
3763 1	URBAN LAND 50%	D	0.00	0"	0.0% V	H	L
3763 2	IMANO CL 40%	C	0.28	10"	2.0% H (w)	H	H
3764 1	URBAN LAND 60%	D	0.00	0"	0.0% V	H	L
3764 2	MAHONE LFS 35%	C	0.17	8"	0.4% I	H	I
3765 1	URBAN LAND 50%	D	0.00	0"	0.0% V	H	L
3765 2	SALTCREEK FSL 35%	C	0.20	5"	1.5% I	H	I
3765 3	NARON FSL 15%	B	0.20	7"	2.0% H	I	I
3766 1	URBAN LAND 50%	D	0.00	0"	0.0% V	H	L
3766 2	SAXMAN LS 45%	A	0.20	4"	0.7% H (w)	L	L
3767 1	URBAN LAND 50%	D	0.00	0"	0.0% V	H	L
3767 2	WILLOWBROOK FSL 45%	B	0.20	4"	1.5% H (w)	I	I
3768 1	URBAN LAND 50%	D	0.00	0"	0.0% V	H	L
3768 2	YAGGY FSL 45%	C	0.20	5"	0.8% H (w)	H	I
3900 1	WARNUT FSL 75%	D	0.20	2"	0.8% H (w)	H	H
3926 1	WATER 100%		0.00	0"	0.0% ?	?	?
3966 1	WILLOWBROOK FSL 90%	B	0.20	4"	1.5% H (w)	I	I
4004 1	YAGGY FSL 95%	C	0.20	5"	0.8% H (w)	H	I
4005 1	YAGGY FSL 60%	C	0.20	5"	0.8% H (w)	H	I
4005 2	SAXMAN LS 30%	A	0.20	4"	0.7% H (w)	L	L
4110 1	ZELLMONT SL 70%	B	0.20	8"	1.5% H	I	I
4110 2	POXMASH SL 30%	B	0.20	5"	1.4% H	I	I
990 1	ABBYVILLE L 95%	C	0.43	8"	2.0% H (w)	H	H
991 1	ABBYVILLE FSL 45%	C	0.32	8"	2.0% H (w)	H	H
991 2	KISIWA L 40%	D	0.43	4"	2.5% H (w)	H	H
Ab 1	ALBION SL 60%	B	0.20	8"	1.5% H	I	I
Ab 2	SHELLABARGER SL 40%	B	0.20	7"	1.5% H	I	I
As 1	ALBION SL 60%	B	0.20	8"	1.5% H	I	I
As 2	SHELLABARGER SL 40%	B	0.20	7"	1.5% H	I	I



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Ba 1	BETHANY SIL 100%	C	0.37	6"	2.0% L	H	H
Be 1	BETHANY SIL 100%	C	0.37	6"	2.0% L	H	H
Bk 1	BREAKS L 65%	B	0.37	11"	2.0% I	I	I
Bk 2	ALLUVIAL LAND SIL 35%	B	0.43	40"	2.0% L	I	I
Ca 1	CANADIAN FSL 100%	B	0.20	30"	2.0% L	I	I
Cd 1	CARWILE FSL 100%	D	0.24	23"	2.0% H (w)	H	H
Cf 1	CARWILE FSL 55%	D	0.24	23"	2.0% H (w)	H	H
Cf 2	FARNUM FSL 45%	B	0.20	9"	1.5% H	I	I
Ck 1	CLARK FSL 100%	B	0.20	10"	1.5% H	I	I
Cm 1	CLARK L 55%	B	0.28	10"	1.5% I	I	I
Cm 2	OST CL 45%	B	0.32	9"	2.0% I	I	I
Co 1	CLARK L 70%	B	0.28	8"	1.5% I	I	I
Co 2	OST CL 30%	B	0.32	9"	2.0% I	I	I
Cp 1	CLARK L 70%	B	0.28	6"	1.5% H	I	I
Cp 2	OST CL 30%	B	0.32	9"	2.0% I	I	I
Da 1	DALE CL 100%	B	0.28	26"	2.0% L	I	I
Ep 1	ELSMERE LFS 60%	A	0.17	16"	1.0% H (w)	L	L
Ep 2	PLEVNA LFS 40%	D	0.17	14"	2.5% H (w)	H	H
Et 1	ELSMERE LFS 90%	A	0.17	16"	1.0% H (w)	L	L
Fa 1	FARNUM FSL 100%	B	0.20	16"	1.5% I	I	I
Fm 1	FARNUM L 100%	B	0.28	22"	2.0% I	I	I
Fn 1	FARNUM L 100%	B	0.28	16"	2.0% I	I	I
Fs 1	FARNUM L 50%	B	0.28	8"	2.0% I	I	I
Fs 2	SLICKSPOTS L 50%	D	0.49	10"	0.8% H (w)	H	H
Ft 1	FARNUM L 50%	B	0.28	22"	2.0% I	I	I
Ft 2	TABLER CL 50%	D	0.43	8"	2.0% V	H	H
Lc 1	LESHO CL 100%	C	0.28	11"	2.0% H (w)	H	H
Na 1	NARON FSL 100%	B	0.20	8"	2.0% I	I	I
Ne 1	NARON FSL 100%	B	0.20	8"	2.0% I	I	I
Nf 1	NARON FSL 60%	B	0.20	8"	2.0% I	I	I



WIN-PST SPISP II  
SOIL SENSITIVITY TO PESTICIDE LOSS RATING REPORT

Soils Data Table: SOIL\_KS Sort Order: MUSYM

Reno County, Kansas: KS155

Nf 2	FARNUM L 40%	B	0.28	22"	2.0% I	I	I
Np 1	NARON FSL 60%	B	0.20	8"	2.0% I	I	I
Np 2	PRATT LFS 40%	A	0.17	12"	0.8% H	L	L
Ns 1	NASH L 80%	B	0.37	30"	2.0% L	I	I
Nt 1	NASH L 65%	B	0.37	30"	2.0% L	I	I
Nt 2	LUCIEN L 35%	C	0.37	14"	0.5% L	H	H
Nu 1	LUCIEN L 50%	C	0.37	14"	0.5% L	H	H
Nu 2	NASH L 50%	B	0.37	30"	2.0% L	I	I
Pa 1	PLATTE LFS 100%	B	0.17	7"	1.5% H (w)	I	I
Pe 1	PLEVNA FSL 100%	D	0.20	14"	2.5% H (w)	H	H
Pl 1	PORT CL 100%	B	0.37	12"	2.0% I	I	I
Pm 1	PRATT LFS 100%	A	0.17	12"	0.8% H	L	L
Pr 1	PRATT LFS 100%	A	0.17	12"	0.8% H	L	L
Pt 1	PRATT LFS 60%	A	0.17	12"	0.8% H	L	L
Pt 2	CARWILE FSL 40%	D	0.24	23"	2.0% H (w)	H	H
Rc 1	RENFROW CL 100%	D	0.37	11"	0.8% V	H	H
Re 1	RENFROW CL 100%	D	0.37	11"	0.8% V	H	H
Rv 1	RENFROW CL 70%	D	0.37	11"	0.8% V	H	H
Sa 1	SHELLABARGER FSL 100%	B	0.20	7"	1.5% H	I	I
Sb 1	SHELLABARGER FSL 100%	B	0.20	7"	1.5% H	I	I
Sc 1	SHELLABARGER FSL 100%	B	0.24	7"	2.0% H	I	I
Se 1	SHELLABARGER LFS 100%	B	0.20	7"	1.5% H	I	I
Sg 1	ALBION SL 50%	B	0.20	8"	1.5% H	I	I
Sg 2	SHELLABARGER SL 50%	B	0.20	7"	1.5% H	I	I
Sh 1	SHELLABARGER FSL 50%	B	0.20	7"	1.5% H	I	I
Sh 2	CLARK L 35%	B	0.28	10"	1.5% I	I	I
Sm 1	SHELLABARGER FSL 65%	B	0.20	7"	1.5% H	I	I
Sm 2	FARNUM L 35%	B	0.28	22"	2.0% I	I	I
Sn 1	FARNUM L 50%	B	0.28	22"	2.0% I	I	I
Sn 2	SHELLABARGER FSL 50%	B	0.20	7"	1.5% H	I	I



WIN-PST SPISP II  
SOIL SENSITIVITY TO PESTICIDE LOSS RATING REPORT

Soils Data Table: SOIL\_KS Sort Order: MUSYM

Reno County, Kansas: KS155

So 1	SLICKSPOTS L 100%	D	0.49	8"	0.8% H (w)	H	H
Sp 1	SMOLAN SICL 90%	C	0.37	5"	3.0% L	H	H
St 1	SMOLAN SICL 100%	C	0.37	16"	3.0% L	H	H
Ta 1	TABLER CL 100%	D	0.43	8"	2.0% V	H	H
Tb 1	TABLER CL 65%	D	0.43	8"	2.0% V	H	H
Tb 2	SLICKSPOTS L 35%	D	0.49	8"	0.8% H (w)	H	H
Tf 1	TIVOLI FS 100%	A	0.17	5"	0.5% H	L	I (s)
Th 1	TIVOLI LFS 100%	A	0.17	5"	0.5% H	L	L
Va 1	VANOSS SIL 100%	B	0.37	11"	2.0% I	I	I
Vb 1	VANOSS SIL 100%	B	0.37	11"	2.0% I	I	I
Vc 1	VANOSS SIL 100%	B	0.37	11"	2.0% I	I	I
Ve 1	VERNON SOILS C 100%	D	0.32	8"	1.3% V	H	H (s)
W 1	WATER 100%		0.00	0"	0.0% ?	?	?
Wa 1	WANN FSL 100%	C	0.20	13"	1.5% H (w)	H	I
We 1	WET ALLUVIAL LAND LFS 100%	D	0.17	11"	2.0% H (w)	H	H

(.\REPORTS\SOILS.TXT generated on 12/12/01 at 12:11:15)

H -- High  
I -- Intermediate  
L -- Low  
V -- Very Low

Conditions that affect ratings:

- m -- There are macropores in the surface horizon deeper than 24"
- w -- The high water table comes within 24" of the surface during the growing season
- s -- The field slope is greater than 15%

SPISP II S-Ratings:

- SLP -- Soil Leaching Potential
- SSRP -- Soil Solution Runoff Potential
- SARP -- Soil Adsorbed Runoff Potential



In this section, hydric soils are defined and described and the hydric soils in the survey area are listed. The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for each of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 1995). These criteria are used to identify a phase of a soil series that normally is associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (USDA, 1999) and "Keys to Soil Taxonomy" (USDA, 1998) and in the "Soil Survey Manual" (USDA, 1993).

If soils are wet enough for a long enough period to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils in this survey area are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and others, 1996).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units in the Hydric Soil Interpretations table meet the definition of hydric soils and, in addition, have at least one of the hydric soil indicators. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 1996).

Map units that are made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

These map units, in general, do not meet the definition of hydric soils because they do not have one of the hydric soil indicators. A portion of these map units, however, may include hydric soils. Onsite investigation is recommended to determine whether hydric soils occur and the location of the included hydric soils.



HYDRIC SOIL INTERPRETATIONS  
HYDRIC SOILS LIST  
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All mapunits are displayed regardless of hydric status and are listed in alpha-numeric order by mapunit symbol. The "Hydric Soils Criteria" columns indicate the conditions that caused the mapunit component to be classified as "Hydric" or "Non-Hydric". These criteria are defined in "Hydric Soils of the United States" (USDA Miscellaneous Publication No. 1491, June, 1991). See the "Criteria for Hydric Soils" endnote to determine the meaning of these columns. Spot symbols are footnoted at the end of the table.

Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
990: ABBYVILLE LOAM, 0 TO 1 PERCENT SLOPES	ABBYVILLE	No	terrace	---	---	---	---
	KISIWA	Yes	terrace, flood plain	3,2B3	YES	NO	YES
991: ABBYVILLE-KISIWA COMPLEX, 0 TO 2 PERCENT SLOPES, FLOODED	ABBYVILLE	No	terrace	---	---	---	---
	KISIWA	Yes	terrace, flood plain	2B3	YES	NO	NO
	SAXMAN	No	flood plain	---	---	---	---
	DARLOW	No	terrace	---	---	---	---
1004: ALBION SANDY LOAM, 0 TO 1 PERCENT SLOPES	ALBION	No	paleoterrace	---	---	---	---
	SHELLABARGER	No	paleoterrace	---	---	---	---
1011: ALBION-SHELLABARGER SANDY LOAMS, 1 TO 3 PERCENT SLOPES	ALBION	No	paleoterrace	---	---	---	---
	SHELLABARGER	No	paleoterrace	---	---	---	---
	Unnamed Wet Soils	Yes	paleoterrace drainageway	2A, 2B1, 2B2, 2B3	YES	NO	NO
1057: AQUENTS, FREQUENTLY PONDED	AQUENTS	Yes	depression, paleoterrace	2B3, 3	YES	NO	YES
1061: ARENTS, EARTHEN DAM	ARENTS, EARTHEN DAM	Unranked	---	---	---	---	---
1062: ARENTS, LOAMY	ARENTS, LANDFILL	---	---	---	---	---	---
1070: AVANS LOAM, 0 TO 1 PERCENT SLOPES	AVANS	No	paleoterrace	---	---	---	---
	Unnamed Wet Soils	Yes	depression, drainageway	2A, 3, 2B3	YES	NO	YES
1071: AVANS LOAM, 1 TO 3 PERCENT SLOPES	AVANS	No	paleoterrace	---	---	---	---
	OST	No	paleoterrace	---	---	---	---
	Unnamed Wet Soils	Yes	depression, drainageway	2A, 3, 2B3	YES	NO	YES
1072: AVANS LOAM, 3 TO 7 PERCENT SLOPES	AVANS	No	paleoterrace	---	---	---	---
	OST	No	paleoterrace	---	---	---	---
	Unnamed Wet Soils	Yes	drainageway	2A, 3, 2B3, 4	YES	YES	YES
1191: BLAZEFOK SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES, RARELY FLOODED	BLAZEFOK	No	flood plain	---	---	---	---
	TOBIN	No	flood plain	---	---	---	---
	Unnamed Wet Soils	Yes	drainageway	2A, 3, 4	YES	YES	YES
1192: BLAZEFOK-KASKAN COMPLEX, 0 TO 1 PERCENT SLOPES, RARELY FLOODED	BLAZEFOK	No	flood plain	---	---	---	---
	KASKAN	No	flood plain	---	---	---	---
	Unnamed Wet Soils	Yes	drainageway	2A, 3, 4	YES	YES	YES
1200: BUHLER-BLAZEFOK SILTY CLAY LOAMS, 0 TO 1 PERCENT SLOPES, RARELY FLOODED	BUHLER	No	flood plain	---	---	---	---
	BLAZEFOK	No	flood plain	---	---	---	---
	TOBIN	No	flood plain	---	---	---	---
	Unnamed Wet Soils	Yes	drainageway	2A, 3, 4	YES	YES	YES



HYDRIC SOIL INTERPRETATIONS  
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All mapunits are displayed regardless of hydric status and are listed in alpha-numeric order by mapunit symbol. The "Hydric Soils Criteria" columns indicate the conditions that caused the mapunit component to be classified as "Hydric" or "Non-Hydric". These criteria are defined in "Hydric Soils of the United States" (USDA Miscellaneous Publication No. 1491, June, 1991). See the "Criteria for Hydric Soils" endnote to determine the meaning of these columns. Spot symbols are footnoted at the end of the table.

Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
1324: CARWAY AND CARBIKA SOILS, 0 TO 1 PERCENT SLOPES	CARWAY	Yes	depression, interdune, paleoterrace	3,2B3	YES	NO	YES
	CARBIKA	Yes	depression, interdune, paleoterrace	3,2B3	YES	NO	YES
	SOLVAY	No	interdune, paleoterrace	---	---	---	---
1357: CARWAY-DILLHUT-SOLVAY COMPLEX, 0 TO 2 PERCENT SLOPES	CARWAY	Yes	depression, interdune, paleoterrace	2B3,3	YES	NO	YES
	DILLHUT	No	dune, paleoterrace	---	---	---	---
	SOLVAY	No	interdune, paleoterrace	---	---	---	---
	CARBIKA	Yes	depression, interdune, paleoterrace	3,2B3	YES	NO	YES
1359: CLARK-OST LOAMS, 3 TO 7 PERCENT SLOPES	CLARK	No	paleoterrace	---	---	---	---
	OST Unnamed Wet Soils	No Yes	paleoterrace drainageway	--- 2A,2B1,2B3, 2B2	--- YES	--- NO	--- NO
1428: CRETE SILT LOAM, 0 TO 1 PERCENT SLOPES	Unnamed wet soils	Yes	depression	2B3,3,2A,4	YES	YES	YES
	CRETE	No	---	---	---	---	---
1429: CRETE SILT LOAM, 1 TO 3 PERCENT SLOPES	CRETE	No	hillslope	---	---	---	---
	Unnamed Wet Soils	Yes	depression	2A,3,2B3	YES	NO	YES
1553: DARLOW-ELMER COMPLEX, 0 TO 2 PERCENT SLOPES	DARLOW	No	terrace	---	---	---	---
	ELMER	No	terrace	---	---	---	---
	PUNKIN	No	paleoterrace	---	---	---	---
	CARBIKA	Yes	depression, interdune, paleoterrace	2B3,3	YES	NO	YES
	CARWAY	Yes	depression, interdune, paleoterrace	2B3,3	YES	NO	YES
1554: DILLHUT FINE SAND, 1 TO 3 PERCENT SLOPES	DILLHUT	No	dune, paleoterrace	---	---	---	---
	DILLWYN	No	interdune, dune, paleoterrace	---	---	---	---
1555: DILLHUT-PLEV COMPLEX, 0 TO 2 PERCENT SLOPES	DILLHUT	No	dune, paleoterrace	---	---	---	---
	PLEV	Yes	depression, interdune, paleoterrace	2B2	YES	NO	NO
	DILLWYN	No	interdune, dune, paleoterrace	---	---	---	---
	WARNUT	Yes	interdune, depression, paleoterrace	2B3,3	YES	NO	YES
1556: DILLHUT-SOLVAY COMPLEX, 0 TO 3 PERCENT SLOPES	DILLHUT	No	dune, paleoterrace	---	---	---	---
	SOLVAY	No	interdune, paleoterrace	---	---	---	---
	DILLWYN	No	interdune, dune, paleoterrace	---	---	---	---
	CARWAY	Yes	depression, interdune, paleoterrace	3,2B3	YES	NO	YES



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Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
1725: FARNUM AND FUNMAR LOAMS, 0 TO 1 PERCENT SLOPES	FARNUM	No	paleoterrace	---	---	---	---
	FUNMAR	No	paleoterrace	---	---	---	---
	NARON	No	dune,	---	---	---	---
	CARBIKA	Yes	paleoterrace depression, interdune,	2B3,3	YES	NO	YES
1727: FUNMAR-TAVER LOAMS, 0 TO 2 PERCENT SLOPES	CARWAY	Yes	paleoterrace depression, interdune,	2B3,3	YES	NO	YES
	FUNMAR	No	paleoterrace	---	---	---	---
	TAVER	No	paleoterrace	---	---	---	---
	CARBIKA	Yes	depression, interdune, paleoterrace	2B3,3	YES	NO	YES
1804: GEARY SILT LOAM, 1 TO 3 PERCENT SLOPES	GEARY	No	hillslope	---	---	---	---
	Unnamed Wet Soils	Yes	drainageway	2A,3,2B3	YES	NO	YES
1807: GEARY SILTY CLAY LOAM, 3 TO 7 PERCENT SLOPES, MODERATELY ERODED	GEARY	No	hillslope	---	---	---	---
	Unnamed Wet Soils	Yes	drainageway	2A,3,2B3	YES	NO	YES
1985: HAYES FINE SANDY LOAM, 1 TO 5 PERCENT SLOPES	HAYES	No	dune,	---	---	---	---
	ATTICA	No	paleoterrace dune,	---	---	---	---
	SALTCREEK	No	paleoterrace dune, paleoterrace	---	---	---	---
1986: HAYES-SOLVAY LOAMY FINE SANDS, 0 TO 5 PERCENT SLOPES	HAYES	No	dune, paleoterrace	---	---	---	---
	SOLVAY	No	interdune, paleoterrace	---	---	---	---
	CARWAY	Yes	depression, interdune, paleoterrace	3,2B3	YES	NO	YES
	FARNUM	No	paleoterrace	---	---	---	---
1987: HAYES-TURON COMPLEX, 0 TO 5 PERCENT SLOPES	HAYES	No	dune, paleoterrace	---	---	---	---
	TURON	No	dune, paleoterrace	---	---	---	---
	NARON	No	dune, paleoterrace	---	---	---	---
	SOLVAY	No	interdune, paleoterrace	---	---	---	---
	CARWAY	Yes	depression, interdune, paleoterrace	3,2B3	YES	NO	YES
2204: JAMASH-PIEDMONT CLAY LOAMS, 0 TO 1 PERCENT SLOPES	JAMASH	No	pediment	---	---	---	---
	PIEDMONT Unnamed Wet Soils	Yes	pediment drainageway	2B3,4	YES	YES	NO
2205: JAMASH-PIEDMONT CLAY LOAMS, 1 TO 3 PERCENT SLOPES	JAMASH	No	pediment	---	---	---	---
	PIEDMONT Unnamed Wet Soils	Yes	pediment drainageway	2B3,4	YES	YES	NO
2206: JAMASH-PIEDMONT CLAY LOAMS, 3 TO 12 PERCENT SLOPES	JAMASH	No	pediment	---	---	---	---
	PIEDMONT Unnamed Wet Soils	Yes	pediment drainageway	2B3,4	YES	YES	NO



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HYDRIC SOILS LIST  
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All mapunits are displayed regardless of hydric status and are listed in alpha-numeric order by mapunit symbol. The "Hydric Soils Criteria" columns indicate the conditions that caused the mapunit component to be classified as "Hydric" or "Non-Hydric". These criteria are defined in "Hydric Soils of the United States" (USDA Miscellaneous Publication No. 1491, June, 1991). See the "Criteria for Hydric Soils" endnote to determine the meaning of these columns. Spot symbols are footnoted at the end of the table.

Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
2207: JAMASH CLAY LOAM, 0 TO 8 PERCENT SLOPES	JAMASH	No	pediment	---	---	---	---
	PIEDMONT Unnamed Wet Soils	No Yes	pediment drainageway	--- 2B3,4	--- YES	--- YES	--- NO
2381: KANZA-NINNESCAH SANDY LOAMS, 0 TO 2 PERCENT SLOPES, COMMONLY FLOODED	KANZA	Yes	flood plain	2B3	YES	NO	NO
	NINNESCAH	Yes	flood plain	2B3	YES	NO	NO
2390: KASKAN LOAM, 0 TO 1 PERCENT SLOPES, RARELY FLOODED	KASKAN	No	flood plain	---	---	---	---
	TOBIN	No	flood plain	---	---	---	---
2391: KASKAN SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES, FREQUENTLY FLOODED, CHANNELED	KASKAN	No	flood plain	---	---	---	---
	TOBIN Unnamed Wet Soils	No Yes	flood plain depression, drainageway	--- 2B1,2B2,2B3,4	--- YES	--- YES	--- NO
2395: KISIWA LOAM, 0 TO 1 PERCENT SLOPES	KISIWA	Yes	terrace, flood plain	3,2B3	YES	NO	YES
	PUNKIN CARBIKA	No Yes	paleoterrace depression, interdune, paleoterrace	--- 3,2B3	--- YES	--- NO	--- YES
2509: LADYSMITH SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES	LADYSMITH	No	paleoterrace	---	---	---	---
	Unnamed Wet Soils	Yes	depression	2B3,3	YES	NO	YES
2556: LANGDON FINE SAND, 0 TO 15 PERCENT SLOPES	LANGDON	No	dune, paleoterrace	---	---	---	---
	TIVIN	No	dune, paleoterrace	---	---	---	---
	TURON	No	dune, paleoterrace	---	---	---	---
	CARWAY	Yes	depression, interdune, paleoterrace	3,2B3	YES	NO	YES
	WARNUT	Yes	interdune, depression, paleoterrace	2B3,3	YES	NO	YES
2587: IMANO CLAY LOAM, 0 TO 1 PERCENT SLOPES, OCCASIONALLY FLOODED	IMANO	No	flood plain	---	---	---	---
	WILLOWBROOK	No	flood plain	---	---	---	---
	KANZA	Yes	flood plain	2B3	YES	NO	NO
	NINNESCAH	Yes	flood plain	2B3	YES	NO	NO
2588: LONGFORD SILTY CLAY LOAM, 3 TO 7 PERCENT SLOPES, MODERATELY ERODED	LONGFORD	No	hillslope	---	---	---	---
	GEARY	No	hillslope	---	---	---	---
2812: MAHONE LOAMY FINE SAND, 0 TO 2 PERCENT SLOPES, RARELY FLOODED	MAHONE	No	flood plain	---	---	---	---
	YAGGY	No	flood plain	---	---	---	---
2948: NALIM LOAM, 0 TO 1 PERCENT SLOPES	NALIM	No	paleoterrace	---	---	---	---
	FARNUM Unnamed Wet Soils	No Yes	paleoterrace depression	--- 2B3,3	--- YES	--- NO	--- YES
2949: NARON FINE SANDY LOAM, 3 TO 7 PERCENT SLOPES, MODERATELY ERODED	NARON	No	dune, paleoterrace	---	---	---	---
	SALTCREEK	No	dune, paleoterrace	---	---	---	---



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Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
2950: NARON FINE SANDY LOAM, 7 TO 15 PERCENT SLOPES, MODERATELY ERODED	NARON	No	dune, paleoterrace	---	---	---	---
2951: NASH SILT LOAM, 1 TO 3 PERCENT SLOPES	AVANS	No	paleoterrace	---	---	---	---
	NASH	No	interfluv	---	---	---	---
	LUCIEN Unnamed Wet Soils	No Yes	interfluv drainageway	--- 2B3,4	--- YES	--- YES	--- NO
2952: NASH-LUCIEN SILT LOAMS, 3 TO 7 PERCENT SLOPES	NASH	No	hillslope	---	---	---	---
	LUCIEN OST Unnamed Wet Soils	No No Yes	hillslope paleoterrace drainageway	--- --- 2B3,4	--- --- YES	--- --- YES	--- --- NO
	NASH	No	hillslope	---	---	---	---
2953: NASH-LUCIEN SILT LOAMS, 7 TO 15 PERCENT SLOPES, MODERATELY ERODED	NASH	No	hillslope	---	---	---	---
	LUCIEN CLARK Unnamed Wet Soils	No No Yes	hillslope paleoterrace drainageway	--- --- 2B3,4	--- --- YES	--- --- YES	--- --- NO
	NICKERSON	No	terrace	---	---	---	---
2955: NICKERSON FINE SANDY LOAM, 0 TO 1 PERCENT SLOPES	CARWAY	Yes	depression, interdune, paleoterrace	2B3,3	YES	NO	YES
	NICKERSON	No	terrace	---	---	---	---
	CARWAY	Yes	depression, interdune, paleoterrace	3,2B3	YES	NO	YES
2956: NICKERSON LOAMY FINE SAND, 0 TO 2 PERCENT SLOPES	CARBIKA	Yes	depression, interdune, paleoterrace	2B3,3	YES	NO	YES
	NICKERSON	No	terrace	---	---	---	---
	PUNKIN CARBIKA	No Yes	paleoterrace depression, interdune, paleoterrace	--- 3,2B3	--- YES	--- NO	--- YES
2957: NICKERSON-PUNKIN FINE SANDY LOAMS, 0 TO 2 PERCENT SLOPES	CARWAY	Yes	depression, interdune, paleoterrace	3,2B3	YES	NO	YES
	NINNESCAH	Yes	flood plain	2B3	YES	NO	NO
	KANZA	Yes	flood plain	2B3	YES	NO	NO
2958: NINNESCAH FINE SANDY LOAM, 0 TO 1 PERCENT SLOPES, OCCASIONALLY FLOODED	NINNESCAH	Yes	flood plain	2B3	YES	NO	NO
2959: NINNESCAH FINE SANDY LOAM, 0 TO 1 PERCENT SLOPES, OCCASIONALLY FLOODED, SALINE	NINNESCAH	Yes	flood plain	2B3	YES	NO	NO
3051: OST LOAM, 0 TO 1 PERCENT SLOPE	OST	No	paleoterrace	---	---	---	---
	CLARK Unnamed Wet Soils	No Yes	paleoterrace depression	--- 2A,2B3,3	--- YES	--- NO	--- YES
	OST	No	paleoterrace	---	---	---	---
3052: OST-CLARK LOAMS, 1 TO 3 PERCENT SLOPES	CLARK Unnamed Wet Soils	No Yes	paleoterrace drainageway	--- 2A,2B1,2B2	--- YES	--- NO	--- NO



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Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
3170: PENALOSA SILT LOAM, 0 TO 1 PERCENT SLOPES	PENALOSA	No	paleoterrace	---	---	---	---
	CARBIKA	Yes	depression, interdune, paleoterrace	3,2B3	YES	NO	YES
3171: PENALOSA SILT LOAM, 1 TO 3 PERCENT SLOPES	PENALOSA	No	paleoterrace	---	---	---	---
	Unnamed Wet Soils	Yes	drainageway	2B3,3	YES	NO	YES
3180: PRATT FINE SAND, 5 TO 10 PERCENT SLOPES	PRATT	No	dune, paleoterrace	---	---	---	---
	ATTICA	No	dune, paleoterrace	---	---	---	---
3181: PRATT-TURON FINE SANDS, 1 TO 5 PERCENT SLOPES	PRATT	No	dune, paleoterrace	---	---	---	---
	TURON	No	dune, paleoterrace	---	---	---	---
	HAYES	No	dune, paleoterrace	---	---	---	---
	CARWAY	Yes	depression, interdune, paleoterrace	2B3,3	YES	NO	YES
	WARNUT	Yes	interdune, depression, paleoterrace	3,2B3	YES	NO	YES
3190: PUNKIN SILT LOAM, 0 TO 1 PERCENT SLOPES	PUNKIN	No	paleoterrace	---	---	---	---
	DARLOW	No	terrace	---	---	---	---
	CARBIKA	Yes	depression, interdune, paleoterrace	2B3,3	YES	NO	YES
3191: PUNKIN-TAVER COMPLEX, 0 TO 1 PERCENT SLOPES	KISIWA	Yes	terrace, flood plain	2B3,3	YES	NO	YES
	PUNKIN	No	paleoterrace	---	---	---	---
	TAVER	No	paleoterrace	---	---	---	---
	DARLOW	No	terrace	---	---	---	---
	CARBIKA	Yes	depression, interdune, paleoterrace	2B3,3	YES	NO	YES
	KISIWA	Yes	terrace, flood plain	2B3,3	YES	NO	YES
3403: SAND PITS	SAND PIT	Unranked	---	---	---	---	---
3469: SMOLAN SILTY CLAY LOAM, 1 TO 3 PERCENT SLOPES	SMOLAN	No	hillslope	---	---	---	---
	LONGFORD	No	hillslope	---	---	---	---
3510: SALTCREEK-FUNMAR-FARNUM COMPLEX, 1 TO 3 PERCENT SLOPES	SALTCREEK	No	dune, paleoterrace	---	---	---	---
	FUNMAR	No	paleoterrace	---	---	---	---
	FARNUM	No	paleoterrace	---	---	---	---
	CARBIKA	Yes	depression, interdune, paleoterrace	3,2B3	YES	NO	YES
3511: SALTCREEK AND NARON FINE SANDY LOAMS, 0 TO 1 PERCENT SLOPES	CARWAY	Yes	depression, interdune, paleoterrace	3,2B3	YES	NO	YES
	SALTCREEK	No	dune, paleoterrace	---	---	---	---
	NARON	No	dune, paleoterrace	---	---	---	---



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Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
3512: SALTCREEK AND NARON FINE SANDY LOAMS, 1 TO 3 PERCENT SLOPES	SALTCREEK	No	dune, paleoterrace	---	---	---	---
	NARON	No	dune, paleoterrace	---	---	---	---
	FUNMAR	No	paleoterrace	---	---	---	---
	CARBIKA	Yes	depression, interdune, paleoterrace	3, 2B3	YES	NO	YES
	CARWAY	Yes	depression, interdune, paleoterrace	2B3, 3	YES	NO	YES
3520: SAXMAN LOAMY SAND, 0 TO 1 PERCENT SLOPES	TAVER	No	paleoterrace	---	---	---	---
	SAXMAN	No	flood plain	---	---	---	---
	WILLOWBROOK	No	flood plain	---	---	---	---
3530: SHELLABARGER, ERODED AND ALBION SOILS, 7 TO 15 PERCENT SLOPES	SHELLABARGER	No	paleoterrace	---	---	---	---
	ALBION	No	paleoterrace	---	---	---	---
	CLARK	No	paleoterrace	---	---	---	---
	Unnamed Wet Soils	Yes	drainageway	2A, 2B1, 2B3, 2B2	YES	NO	NO
3531: SHELLABARGER AND NALIM SOILS, 3 TO 7 PERCENT SLOPES	SHELLABARGER	No	paleoterrace	---	---	---	---
	NALIM	No	paleoterrace	---	---	---	---
3532: SHELLABARGER LOAMY SAND, 0 TO 3 PERCENT SLOPES	SHELLABARGER	No	paleoterrace	---	---	---	---
	ALBION	No	paleoterrace	---	---	---	---
3533: SHELLABARGER SANDY LOAM, 0 TO 1 PERCENT SLOPES	SHELLABARGER	No	paleoterrace	---	---	---	---
	NALIM	No	paleoterrace	---	---	---	---
	Unnamed Wet Soils	Yes	depression	2A, 2B3, 3	YES	NO	YES
3534: SHELLABARGER SANDY LOAM, 1 TO 3 PERCENT SLOPES	SHELLABARGER	No	paleoterrace	---	---	---	---
	ALBION	No	paleoterrace	---	---	---	---
	Unnamed Wet Soils	Yes	drainageway	2A, 2B3	YES	NO	NO
3535: SHELLABARGER-NALIM COMPLEX, 1 TO 3 PERCENT SLOPES	SHELLABARGER	No	paleoterrace	---	---	---	---
	NALIM	No	paleoterrace	---	---	---	---
	Unnamed Wet Soils	Yes	depression, drainageway	2A, 3, 2B3, 4	YES	YES	YES
3540: SOLVAY LOAMY FINE SAND, 0 TO 2 PERCENT SLOPES	SOLVAY	No	interdune, paleoterrace	---	---	---	---
	HAYES	No	dune, paleoterrace	---	---	---	---
	CARBIKA	Yes	depression, interdune, paleoterrace	2B3, 3	YES	NO	YES
	CARWAY	Yes	depression, interdune, paleoterrace	2B3, 3	YES	NO	YES
3550: SPELVIN LOAMY SAND, 0 TO 1 PERCENT SLOPES 3639: TAVER LOAM, 0 TO 1 PERCENT SLOPES	SPELVIN	No	interdune, paleoterrace	---	---	---	---
	TAVER	No	paleoterrace	---	---	---	---
	SALTCREEK	No	dune, paleoterrace	---	---	---	---
	CARBIKA	Yes	depression, interdune, paleoterrace	2B3, 3	YES	NO	YES



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Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
3640: TIVIN FINE SAND, 10 TO 30 PERCENT SLOPES	TIVIN	No	dune,	---	---	---	---
	LANGDON	No	paleoterrace dune,	---	---	---	---
	PLEV	Yes	paleoterrace depression, interdune, paleoterrace	2B2	YES	NO	NO
3641: TIVIN-DILLHUT FINE SANDS, 0 TO 15 PERCENT SLOPES	TIVIN	No	dune,	---	---	---	---
			paleoterrace				
	DILLHUT	No	dune,	---	---	---	---
			paleoterrace				
	SOLVAY	No	interdune,	---	---	---	---
			paleoterrace				
3642: TIVIN-WILLOWBROOK, OCCASIONALLY FLOODED, COMPLEX, 0 TO 12 PERCENT SLOPES	CARWAY	Yes	depression, interdune, paleoterrace	3,2B3	YES	NO	YES
	WARNUT	Yes	interdune, depression, paleoterrace	3,2B3	YES	NO	YES
	PLEV	Yes	depression, interdune, paleoterrace	2B2	YES	NO	NO
	TIVIN	No	dune, flood plain	---	---	---	---
	WILLOWBROOK	No	flood plain	---	---	---	---
3643: TOBIN SILT LOAM, 0 TO 1 PERCENT SLOPES, OCCASIONALLY FLOODED	TOBIN	No	flood plain	---	---	---	---
	Unnamed Wet Soils	Yes	drainageway	2A,2B3,4	YES	YES	NO
3644: TURON-CARWAY COMPLEX, 0 TO 5 PERCENT SLOPES	TURON	No	dune,	---	---	---	---
	CARWAY	Yes	paleoterrace depression, interdune, paleoterrace	3,2B3	YES	NO	YES
	SOLVAY	No	interdune, paleoterrace	---	---	---	---
3760: URBAN LAND-BLAZEFORK-KASKAN COMPLEX, 0 TO 1 PERCENT SLOPES, PROTECTED	URBAN LAND	Unranked	---	---	---	---	---
	BLAZEFORK	No	stream terrace	---	---	---	---
	KASKAN	No	flood plain	---	---	---	---
	Unnamed Wet Soils	Yes	drainageway	2A,3	YES	NO	YES
3762: URBAN LAND-DARLOW-ELMER COMPLEX, 0 TO 1 PERCENT SLOPES	URBAN LAND	Unranked	---	---	---	---	---
	DARLOW	No	terrace	---	---	---	---
	ELMER	No	terrace	---	---	---	---
	PUNKIN	No	paleoterrace	---	---	---	---
	CARBIKA	Yes	depression, interdune, paleoterrace	3,2B3	YES	NO	YES
3763: URBAN LAND-IMANO COMPLEX, 0 TO 1 PERCENT SLOPES, PROTECTED	URBAN LAND	Unranked	---	---	---	---	---
	IMANO	No	flood plain	---	---	---	---
	WILLOWBROOK	No	flood plain	---	---	---	---
	KANZA	Yes	flood plain	2B3	YES	NO	NO
	NINNESCAH	Yes	flood plain	2B3	YES	NO	NO
3764: URBAN LAND-MAHONE COMPLEX, 0 TO 1 PERCENT SLOPES, PROTECTED	URBAN LAND	Unranked	---	---	---	---	---
	MAHONE	No	flood plain	---	---	---	---
	YAGGY	No	flood plain	---	---	---	---



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Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
3765: URBAN LAND-SALTCREEK-NARON COMPLEX, 0 TO 1 PERCENT SLOPES	URBAN LAND	Unranked	---	---	---	---	---
	SALTCREEK	No	dune, paleoterrace	---	---	---	---
	NARON	No	dune, paleoterrace	---	---	---	---
3766: URBAN LAND-SAXMAN COMPLEX, 0 TO 1 PERCENT SLOPES, PROTECTED	URBAN LAND	Unranked	---	---	---	---	---
	SAXMAN	No	flood plain	---	---	---	---
	WILLOWBROOK	No	flood plain	---	---	---	---
3767: URBAN LAND-WILLOWBROOK COMPLEX, 0 TO 1 PERCENT SLOPES, PROTECTED	URBAN LAND	Unranked	---	---	---	---	---
	WILLOWBROOK	No	flood plain	---	---	---	---
	NICKERSON	No	terrace	---	---	---	---
	KANZA	Yes	flood plain	2B3	YES	NO	NO
	NINNESCAH	Yes	flood plain	2B3	YES	NO	NO
3768: URBAN LAND-YAGGY COMPLEX, 0 TO 1 PERCENT SLOPES, PROTECTED	URBAN LAND	Unranked	---	---	---	---	---
	YAGGY	No	flood plain	---	---	---	---
	IMANO	No	flood plain	---	---	---	---
	KANZA	Yes	flood plain	2B3	YES	NO	NO
	NINNESCAH	Yes	flood plain	2B3	YES	NO	NO
3900: WARNUT FINE SANDY LOAM, 0 TO 1 PERCENT SLOPES	WARNUT	Yes	interdune, depression, paleoterrace	3, 2B3	YES	NO	YES
	CARWAY	Yes	depression, interdune, paleoterrace	3, 2B3	YES	NO	YES
3926: WATER	WATER	Yes	---	3, 4	NO	YES	YES
3966: WILLOWBROOK FINE SANDY LOAM, 0 TO 1 PERCENT SLOPES, OCCASIONALLY FLOODED	WILLOWBROOK	No	flood plain	---	---	---	---
	NICKERSON	No	terrace	---	---	---	---
	KANZA	Yes	flood plain	2B3	YES	NO	NO
	NINNESCAH	Yes	flood plain	2B3	YES	NO	NO
4004: YAGGY FINE SANDY LOAM, 0 TO 1 PERCENT SLOPES	YAGGY	No	flood plain	---	---	---	---
	IMANO	No	flood plain	---	---	---	---
	KANZA	Yes	flood plain	2B3	YES	NO	NO
	NINNESCAH	Yes	flood plain	2B3	YES	NO	NO
4005: YAGGY-SAXMAN COMPLEX, 0 TO 2 PERCENT SLOPES, OCCASIONALLY FLOODED	YAGGY	No	flood plain	---	---	---	---
	SAXMAN	No	flood plain	---	---	---	---
	SOLVAY	No	interdune, paleoterrace	---	---	---	---
	KANZA	Yes	flood plain	2B3	YES	NO	NO
	NINNESCAH	Yes	flood plain	2B3	YES	NO	NO
4110: ZELLMONT AND POXMASH SANDY LOAMS, 0 TO 3 PERCENT SLOPES	ZELLMONT	No	strath terrace	---	---	---	---
	POXMASH	No	strath terrace	---	---	---	---
	Unnamed Wet Soils	Yes	drainageway	2A, 2B1, 2B2, 2B3	YES	NO	NO



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Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria

FOOTNOTE: There may be small areas of included soils or miscellaneous areas that are significant to use and management of the soil; yet are too small to delineate on the soil map at the map's original scale. These may be designated as spot symbols and are defined in the published Soil Survey Report or the USDA-NRCS Technical Guide, Part II.

Areas mapped as water or any map unit that contains one of the following conventional symbols is considered a hydric soil map unit: marshes or swamps; wet spots; depressions; streams, lakes and ponds.

1. All Histosols except Folists, or
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Aquisalids, Pachic subgroups, or Cumulic subgroups that are:
  - a. Somewhat poorly drained with a water table equal to 0.0 foot (ft) from the surface during the growing season, or
  - b. poorly drained or very poorly drained and have either:
    - (1) water table equal to 0.0 ft during the growing season if textures are coarse sand, sand, or fine sand in all layers within 20 inches (in), or for other soils
    - (2) water table at less than or equal to 0.5 ft from the surface during the growing season if permeability is equal to or greater than 6.0 in/hour (h) in all layers within 20 in, or
    - (3) water table at less than or equal to 1.0 ft from the surface during the growing season if permeability is less than 6.0 in/h in any layer within 20 in, or
3. Soils that are frequently ponded for long duration or very long duration during the growing season, or
4. Soils that are frequently flooded for long duration or very long duration during the growing season.